4090	61	In a remote indicating compass system the amount of deviation caused by aircraft magnetism and electrical circuits may be minimised by:	positioning the master unit in the centre of the aircraft	using a vertically mounted gyroscope	mounting the detector unit in the wingtip	the use of repeater cards	0	0	1	0
4091	61	(For this question use annex 061-12401A) What are the average magnetic course and distance between position N6000 W02000 and Sumburgh VOR (N5955 W	091° - 562 NM	105° - 480 NM	105° - 562 NM	091° - 480 NM	0	0	1	0
4092	61	When decelerating on a westerly heading in the Northern hemisphere, the compass card of a direct reading magnetic compass will turn :	anti-clockwise giving an apparent turn towards the north	clockwise giving an apparent turn toward the south	anti-clockwise giving an apparent turn towards the south	clockwise giving an apparent turn towards the north	0	1	0	0
4093	61	The value of magnetic variation:	must be 0° at the magnetic equator	varies between a maximum of 45° East and 45° West	cannot exceed 90°	has a maximum of 180°	0	0	0	1
4094	61	(For this question use annex 061-2304A) The UTC of sunrise on 6 December at WINNIPEG (Canada)	0930	0113	2230	1413	0	0	0	1
4095	61	(For this question use annexes 061-2305A and 061-2305B) When it is 1000 Standard Time in Kuwait, the Standard Time in Algeria is:	1200	1300	0700	0800	0	0	0	1
4096	61	The north and south magnetic poles are the only positions on the earth's surface where:	the value of magnetic variation equals 90°	a freely suspended compass needle will stand vertical	isogonals converge	a freely suspended compass needle will stand horizontal	0	1	0	0
4097	61	(For this question use annex 061-12400A) What are the average magnetic course and distance between INGO VOR (N6250 W01640) and Sumburgh VOR (N5955 W	118° - 440 NM	117° - 494 NM	130° - 440 NM	131° - 494 NM	0	0	0	1
4098	61	On a Direct Mercator, rhumb lines are:	ellipses	curves convex to the equator	straight lines	curves concave to the equator	0	0	1	0
4099	61	What is the value of the convergence factor on a Polar Stereographic chart?	0.866	0.5	0.0	1.0	0	0	0	1
4100	61	Which one of the following describes the appearance of rhumb lines, except meridians, on a Polar Stereographic chart?	Ellipses around the Pole	Curves convex to the Pole	Straight lines	Curves concave to the Pole	0	0	0	1
4101	61	Which one of the following statements is correct concerning the appearance of great circles, with the exception of meridians, on a Polar Stereographic chart whose tangency is at the pole ?	They are complex curves that can be convex and/or concave to the Pole	They are curves convex to the Pole	The higher the latitude the closer they approximate to a straight line	Any straight line is a great circle	0	0	1	0
4102	61	On a Lambert conformal conic chart, the distance between parallels of latitude spaced the same number of degrees apart :	expands between, and reduces outside, the standard parallels	is constant throughout the chart	reduces between, and expands outside, the standard parallels	is constant between, and expands outside, the standard parallels	0	0	1	0

4103	61	Which one of the following, concerning great circles on a Direct Mercator chart, is correct?	They are all curves concave to the equator	They approximate to straight lines between the standard parallels	They are all curves convex to the equator	With the exception of meridians and the equator, they are curves concave to the equator	0	0	0	1
4104	61	Parallels of latitude on a Direct Mercator chart are :	parallel straight lines equally spaced	arcs of concentric circles equally spaced	straight lines converging above the pole	parallel straight lines unequally spaced	0	0	0	1
4105	61	On a Direct Mercator chart, meridians are:	parallel, equally spaced, vertical straight lines	inclined, equally spaced, straight lines that meet at the nearer pole	parallel, unequally spaced, vertical straight lines	inclined, unequally spaced, curved lines that meet at the nearer pole	1	0	0	0
4106	61	Which is the highest latitude listed below at which the sun will rise above the horizon and set every day?	66°	68°	72°	62°	1	0	0	0
4107	61	The angle between Magnetic North and Compass North is called:	compass deviation	compass error	magnetic variation	alignment error	1	0	0	0
4108	61	A straight line on a Lambert Conformal Projection chart for normal flight planning purposes:	is approximatel y a Great Circle	is a Loxodromic line	is a Rhumb line	can only be a parallel of latitude	1	0	0	0
4109	61	A Rhumb line is :	a line convex to the nearest pole on a Mercator proj ection	a line on the surface of the earth cutting all meridians at the same angle	the shortest distance between two points on a Polyconic projection	any straight line on a Lambert projection	0	1	0	0
4110	61	Contour lines on aeronautical maps and charts connect points :	having the same elevation above sea level	with the same variatio n	having the same longitude	of equal latitude	1	0	0	0
4111	61	(For this question use annex 061-1828A and the data for 1215 UTC) 1215 UTC LAJES VORTAC (38°46'N 027°05'W) RMI reads 178°, range 135 NM	41°00'N 028°10'W	41°05'N 027°50'W	40°55'N 027°55'W	40°50'N 027°40'W	0	0	1	0
4112	61	A chart has the scale 1 : 1 000 000. From A to B on the chart measures 1.5 inches (one inch equals 2.54 centimetres), the distance from A to B in NM is :	20.6	38.1	44.5	54.2	1	0	0	0
4113	61	The angle between the plane of the ecliptic and the plane of equator is approximately :	23.5°	25.3°	27.5°	66.5°	1	0	0	0
4114	61	A ground feature appears 30° to the left of the centre line of the CRT of an airborne weather radar. If the heading of the aircraft is 355° (M) and the magnetic variation is 15° East, the true bearing of the aircraft from the feature is:	310°	130°	160°	220°	0	0	1	0
4115	61	On which of the following chart projections is it NOT possible to represent the north or south poles?	Transverse Mercator	Polar stereographi c	Direct Mercator	Lambert's conformal	0	0	1	0
4116	61	The chart distance between meridians 10° apart at latitude 65° North is 3.75 inches. The chart scale at this latitude approximates:	1 : 6 000 000	1 : 2 500 000	1 : 3 000 000	1 : 5 000 000	0	0	0	1

4117	61	(For this question use annex 061-1818A) Assume a North polar stereographic chart whose grid is aligned with the Greenwich meridian. An aircraft flies from the geographic North pole for a distance of 480 NM along the 110°E meridian, then follows a grid track	70°15'N 080°E	80°00'N 080°E	78°45'N 087°E	79°15'N 074°E	0	1	0	0
4118	61	Some inertial reference and navigation systems are known as "strapdown". This means that:	only the gyros, and not the accelerometers, become part of the unit's fixture to the aircraft structure	gyros and accelerometers are mounted on a stabilised platform in the aircraft	gyros and accelerometers need satellite information input to obtain a vertical reference	the gyroscopes and accelerometers become part of the unit's fixture to the aircraft structure	0	0	0	1
4119	61	As the INS position of the departure aerodrome, coordinates 35°32.7'N 139°46.3'W are input instead of 35°32.7'N 139°46.3'E. When the aircraft subsequently passes point 52°N 180°W, the longitude value shown on the INS will be:	080° 27.4'W	099° 32.6'W	099° 32.6'E	080° 27.4'E	0	1	0	0
4120	61	In order to maintain an accurate vertical using a pendulous system, an aircraft inertial platform incorporates a device:	without damping and a period of 84.4 SEC	with damping and a period of 84.4 SEC	with damping and a period of 84.4 MIN	without damping and a period of 84.4 MIN	0	0	1	0
4121	61	On a Transverse Mercator chart, scale is exactly correct along the:	meridian of tangency	Equator, parallel of origin and prime vertical	datum meridian and meridian perpendicular to it	prime meridian and the equator	1	0	0	0
4122	61	On a Lambert Conformal Conic chart earth convergency is most accurately represented at the:	parallel of origin	north and south limits of the chart	standard parallels	Equator	1	0	0	0
4123	61	The total length of the 53°N parallel of latitude on a direct Mercator chart is 133 cm. What is the approximate scale of the chart at latitude 30° S?	1 : 30 000 000	1 : 18 000 000	1 : 21 000 000	1 : 25 000 000	0	0	0	1
4124	61	What is the chart distance between longitudes 179°E and 175°W on a direct Mercator chart with a scale of 1 : 5 000 000 at the equator?	167 mm	72 mm	133 mm	106 mm	0	0	1	0
4125	61	The constant of the cone, on a Lambert chart where the convergence angle between longitudes 010°E and 030°W is 30°, is:	0.50	0.64	0.75	0.40	0	0	1	0
4126	61	The platform of an inertial navigation system (INS) is maintained at right angles to the local vertical by applying corrections for the effects of:	gyroscopic inertia, earth rotation and real drift	vertical velocities, earth precession, centrifugal forces and transport drift	movement in the yawing plane, secondary precession and pendulous oscillation	aircraft manoeuvres, earth rotation, transport wander and coriolis	0	0	0	1
4127	61	(For this question use annex 061-2326A to 061-2326D) When it is 0600 Standard Time in Queensland (Australia) the Standard Time in Hawaii (USA) is:	0200	0600	1000	1200	0	0	1	0
4128	61	(For this question use annex 061-2325A to 061-2325D) An aircraft takes off from Guam at 2300 Standard Time on 30 April local date. After a flight of 11 HR 15 MIN it lands at Los Angeles (California). What is the Standard Time and local date of arrival (assume	1715 on 30 April	1215 on 1 May	1315 on 1 May	1615 on 30 April	1	0	0	0

4129	61	Isogonals converge at the:	Magnetic equator	North magnetic pole only	North and South magnetic poles only	North and South geographic and magnetic poles	0	0	0	1
4130	61	When accelerating on an easterly heading in the Northern hemisphere, the compass card of a direct reading magnetic compass will turn :	anti-clockwise giving an apparent turn toward the south	clockwise giving an apparent turn toward the north	clockwise giving an apparent turn toward the south	anti-clockwise giving an apparent turn toward the north	0	1	0	0
4131	61	When turning right from 330°(C) to 040°(C) in the northern hemisphere, the reading of a direct reading magnetic compass will:	over-indicate the turn and liquid swirl will decrease the effect	under-indicate the turn and liquid swirl will decrease the effect	over-indicate the turn and liquid swirl will increase the effect	under-indicate the turn and liquid swirl will increase the effect	0	0	0	1
4132	61	An aircraft in the northern hemisphere makes an accurate rate one turn to the right/starboard. If the initial heading was 330°, after 30 seconds of the turn the direct reading magnetic compass should read:	060°	more than 060°	more or less than 060° depending on the pendulous suspension used	less than 060°	0	0	0	1
4133	61	The horizontal component of the earth's magnetic field:	weakens with increasing distance from the magnetic poles	weakens with increasing distance from the nearer magnetic pole	is approximately the same at all magnetic latitudes less than 60°	is approximately the same at magnetic latitudes 50°N and 50°S	0	0	0	1
4134	61	A line drawn on a chart which joins all points where the value of magnetic variation is zero is called an:	agonic line	aclinic line	isogonal	isotach	1	0	0	0
4135	61	A Lambert conformal conic projection, with two standard parallels:	shows lines of longitude as parallel straight lines	the scale is only correct along the standard parallels	shows all great circles as straight lines	the scale is only correct at parallel of origin	0	1	0	0
4136	61	On a Lambert Conformal chart the distance between meridians 5° apart along latitude 37° North is 9 cm. The scale of the chart at that parallel approximates:	1 : 2 000 000	1 : 6 000 000	1 : 5 000 000	1 : 3 750 000	0	0	1	0
4137	61	On the 27th of February, at 52°S and 040°E, the sunrise is at 0243 UTC. On the same day, at 52° S and 035°W, the sunrise is at:	0523 UTC	0743 UTC	0243 UTC	2143 UTC	0	1	0	0
4138	61	An aeroplane flies from A (59°S 142°W) to B (61°S 148°W) with a TAS of 480 kt. The autopilot is engaged and coupled with an Inertial Navigation System in which AB track is active. On route AB, the true track:	varies by 10°	decreases by 6°	varies by 4°	increases by 5°	0	0	0	1
4139	61	The rhumb-line distance between points A (60°00'N 002°30'E) and B (60°00'N 007°30'W) is:	300 NM	450 NM	600 NM	150 NM	1	0	0	0
4140	61	An aircraft is over position HO (55°30'N 060°15'W), where YYR VOR (53°30'N 060°15'W) can be received. The magnetic variation is 31°W at HO and 28°W at YYR. What is the radial from YYR?	031°	332°	028°	208°	0	0	1	0
4141	61	Given: TAS = 485 kt, OAT = ISA +10°C,	0.87	0.825	0.90	0.85	0	1	0	0

4142	61	Given: A polar stereographic chart whose grid is aligned with the zero meridian. Grid track 344°,	099°	279°	049°	229°	0	0	0	1
4143	61	For a distance of 1860 NM between Q and R, a ground speed "out" of 385 kt, a ground speed "back" of 465 kt and an endurance of 8 HR (excluding reserves) the distance from Q to the point of safe return (PSR) is:	1685 NM	1532 NM	930 NM	1865 NM	1	0	0	0
4144	61	An aircraft travels from point A to point B, using the autopilot connected to the aircraft's inertial system. The coordinates of A (45°S 010°W) and B (45°S 030°W) have been entered. The true course of the aircraft on its arrival at B, to the nearest degree, is:	277°	284°	263°	270°	1	0	0	0
4145	61	The constant of cone of a Lambert conformal conic chart is quoted as 0.3955. At what latitude on the chart is earth convergency correctly	68°25'	21°35'	23°18'	66°42'	0	0	1	0
4146	61	The duration of civil twilight is the time:	agreed by the internatio nal aeronautical authorities which is 12 minutes	needed by the sun to move from the apparent height of 0° to the apparent height of 6°	between sunset and when the centre of the sun is 12° below the true horizon	between sunset and when the centre of the sun is 6° below the true horizon	0	0	0	1
4147	61	The Great Circle bearing of 'B' (70°S 060°E), from 'A' (70° S 030° W), is approximately:	150°(T)	090°(T)	315°(T)	135°(T)	0	0	0	1
4148	61	In a navigation chart a distance of 49 NM is equal to 7 cm. The scale of the chart is approximately:	1 : 7 000 000	1 : 1 300 000	1 : 700 000	1 : 130 000	0	1	0	0
4149	61	At 60° N the scale of a direct Mercator chart is 1 : 3 000 000. What is the scale at the equator?	1 : 3 000 000	1 : 3 500 000	1 : 1 500 000	1 : 6 000 000	0	0	0	1
4150	61	During initial alignment an inertial navigation system is north aligned by inputs from:	horizontal accelerometers and the east gyro	the aircraft remote reading compass system	computer matching of measured gravity magnitude to gravity magnitude of initial alignment	vertical accelerometers and the north gyro	1	0	0	0
4151	61	An aircraft is flying with the aid of an inertial navigation system (INS) connected to the autopilot. The following two points have been entered in the INS computer: WPT 1: 60° N 030°W WPT 2: 60° N 020°W When 025°W is passed the latitude shown on the display unit of the inertial navigation system will be:	60°00.0'N	59°49.0'N	60°11.0'N	60°05.7'N	0	0	0	1
4152	61	The azimuth gyro of an inertial unit has a drift of 0.01°/HR. After a flight of 12 HR with a ground speed of 500 kt, the error on the aeroplane position is approximately :	6 NM	60 NM	12 NM	1 NM	0	0	1	0
4153	61	The drift of the azimuth gyro on an inertial unit induces an error in the position given by this unit. "t" being the elapsed time.	proportional to t/2	sinusoîdal	proportional to t	proportional to the square of time, t^2	0	0	1	0
4154	61	With reference to inertial navigation systems, a TAS input is:	required to provide a W/V read out	not required	required for Polar navigation	required for rhumb line navigation	1	0	0	0

4155	61	Given: AD = Air distance GD = Ground distance TAS = True Airspeed	GD = (AD X GS)/TAS	GD = (AD - TAS)/TAS	GD = AD X (GS -TAS)/GS	GD = TAS/(GS X AD)	1	0	0	0
4156	61	(For this question use annex 061-12583A) Given: SHA VOR (N5243.3 W00853.1) radial 143°,	N5210 W00800	N5155 W00810	N5205 W00805	N5200 W00800	1	0	0	0
4157	61	(For this question refer to annex 061-12604A) What feature is shown on the chart at position N5211	Connemara aerodrome	Punchestown aerodrome	KERRY/Farranfore aerodrome	Waterford NDB	0	0	1	0
4158	61	(For this question use annex 061-12589A) Given: SHA VOR N5243.3 W00853.1 CRK VOR N5150.4 W00829.7	SHA 205° CRK 321°	SHA 033° CRK 149°	SHA 212° CRK 328°	SHA 025° CRK 141°	0	0	1	0
4159	61	(For this question use annex 061-12588A) Given: SHA VOR/DME (N5243.3 W00853.1) radial 048°/22 NM.	N5228 W00920	N5300 W0830	N5258 W00825	N5225 W00917	0	1	0	0
4160	61	(For this question use annex 061-12587A) Given: SHA VOR/DME (N5243.3 W00853.1) radial 025°/49 NM.	N5155 W00915	N5200 W0925	N5330 W00830	N5328 W00820	0	0	1	0
4161	61	(For this question use annex 061-12586A) Given: SHA VOR/DME (N5243.3 W00853.1) radial 232°/32 NM.	N5228 W00935	N5303 W00810	N5220 W00930	N5305 W00815	0	0	1	0
4162	61	(For this question use annex 061-12591A) Given: SHA VOR N5243.3 W00853.1 CRK VOR N5150.4 W00829.7	SHA 068° CRK 145°	SHA 060° CRK 138°	SHA 240° CRK 137°	SHA 248° CRK 325°	0	0	0	1
4163	61	(For this question use annex 061-12584A) Given: SHA VOR/DME (N5243.3 W00853.1) radial 120°/35 NM.	N5250 W00950	N5230 W00800	N5300 W00945	N5225 W00805	0	1	0	0
4164	61	(For this question use annex 061-12592A) Given: SHA VOR N5243.3 W00853.1 CON VOR N5354.8 W00849.1	SHA 042° CON 138°	SHA 213° CON 310°	SHA 033° CON 130°	SHA 221° CON 318°	1	0	0	0
4165	61	(For this question use annex 061-12582A) Given: SHA VOR (N5243.3 W00853.1) radial 129°,	N5220 W00750	N5215 W00755	N5210 W00750	N5205 W00755	1	0	0	0
4166	61	(For this question use annex 061-12581A) Given: SHA VOR (N5243.3 W00853.1) radial 120°,	N5230 W00800	N5225 W00805	N5220 W00750	N5240 W00750	1	0	0	0
4167	61	(For this question use annex 061-12580A) Given: SHA VOR (N5243.3 W00853.1) radial 205°,	N5205 W00915	N5215 W00917	N5210 W00910	N5118 W00913	0	0	1	0

4168	61	(For this question use annex 061-12579A) Given: SHA VOR (N5243.3 W00853.1) radial 223°,	N5210 W00930	N5220 W00920	N5230 W00910	N5210 W00910	0	1	0	0
4169	61	(For this question use annex 061-12578A) What is the average track (°T) and distance between CRN NDB (N5318.1 W00856.5) and EKN NDB (N5423.6	035° - 80 NM	042° - 83 NM	036° - 81 NM	044° - 82 NM	1	0	0	0
4170	61	(For this question use annex 061-12577A) What is the average track (°T) and distance between BAL VOR (N5318.0 W00626.9) and CFN NDB (N5502.6	327° - 124 NM	335° - 128 NM	325° - 126 NM	320° - 127 NM	1	0	0	0
4171	61	(For this question use annex 061-12585A) Given: SHA VOR/DME (N5243.3 W00853.1) radial 165°/36 NM.	N5210 W00830	N5208 W00840	N5315 W00915	N5317 W00908	1	0	0	0
4172	61	Where and when are the IRS positions updated?	During flight IRS positions are automatically updated by the FMC	IRS positions are updated by pressing the 'Take-off/ Go -around' button at the start of the take-off roll	Updating is normally carried out by the crew when over-flying a known position (VOR station or NDB)	Only on the ground during the alignment procedure	0	0	0	1
4173	61	(For this question use annex 061-12560A) What is the radial and DME distance from CON VOR/DME (N5354.8 W00849.1) to position N5330 W00930?	165° - 27 NM	335° - 43 NM	025° - 38 NM	233° - 35 NM	0	0	0	1
4174	61	(For this question refer to annex 061-12602A) Given: CON VOR/DME (N5354.8 W00849.1) Castlebar aerodrome (N5351 W00917)	265° - 17 NM	077° - 18 NM	257° - 17 NM	086° - 18 NM	1	0	0	0
4175	61	(For this question refer to annex 061-12601A) Given: SHA VOR/DME (N5243.3 W00853.1) Connemara aerodrome (N5314 W00928)	154° - 38 NM	326° - 37 NM	146° - 38 NM	333° - 37 NM	0	0	0	1
4176	61	An aircraft is descending down a 12% slope whilst maintaining a GS of 540 kt. The rate of descent of the aircraft is approximately:	4500 FT/MIN	3900 FT/MIN	6500 FT/MIN	650 FT/MIN	0	0	1	0
4177	61	(For this question refer to annex 061-12600A) Given: SHA VOR/DME (N5243.3 W00853.1) Birr aerodrome (N5304 W00754)	240° - 41 NM	068° - 41 NM	248° - 42 NM	060° - 42 Nm	0	1	0	0
4178	61	(For this question use annex 061-12590A) Given: SHA VOR N5243.3 W00853.1 CRK VOR N5150.4 W00829.7	SHA 124° CRK 009°	SHA 131° CRK 017°	SHA 304° CRK 189°	SHA 312° CRK 197°	0	1	0	0
4179	61	(For this question use annex 061-12598A) Given: CON VOR (N5354.8 W00849.1) DME 30 NM, CRN VOR (N5318.1 W00856.5) DME 25 NM,	N5330 W00820	N5343 W00925	N5335 W00925	N5337 W00820	1	0	0	0
4180	61	(For this question use annex 061-12574A) What is the average track (°T) and distance between WTD NDB (N5211.3 W00705.0) and SLG NDB (N5416.7	156° - 136 NM	164° - 138 NM	336° - 137 NM	344° - 139 NM	0	0	1	0

4181	61	What is the source of magnetic variation information in a Flight Management System (FMS)?	Magnetic variation is calculated by each IRS based on the respective IRS position and the aircraft magnetic heading	Magnetic variation information is stored in each IRS memory; it is applied to the true heading calculated by the respective IRS	The main directional gyro which is coupled to the magnetic sensor (flux valve) positioned in the wingtip	The FMS calculates MH and MT from the FMC position	0	1	0	0
4182	61	(For this question use annex 061-12597A) Given: CRN VOR (N5318.1 W00856.5) DME 34 NM, SHA VOR (N5243.3 W00853.1) DME 26 NM,	N5255 W00815	N5250 W0030	N5305 W00930	N5310 W00820	1	0	0	0
4183	61	(For this question use annex 061-12596A) Given: CRN VOR (N5318.1 W00856.5) DME 18 NM, SHA VOR (N5243.3 W00853.1) DME 30 NM,	N5307 W00923	N5355 W00825	N5310 W00830	N5252 W00923	0	0	1	0
4184	61	(For this question use annex 061-12595A) Given: SHA VOR (N5243.3 W00853.1) DME 41 NM, CRK VOR (N5150.4 W00829.7) DME 30 NM,	N5225 W00810	N5215 W00805	N5205 W00915	N5215 W00915	0	1	0	0
4185	61	(For this question use annex 061-12594A) Given: SHA VOR (N5243.3 W00853.1) DME 50 NM, CRK VOR (N5150.4 W00829.7) DME 41 NM,	N5235 W00750	N5200 W00935	N5215 W00940	N5215 W00745	0	1	0	0
4186	61	(For this question use annex 061-12593A) Given: SHA VOR N5243.3 W00853.1 CON VOR N5354.8 W00849.1	SHA 137° CON 046°	SHA 317° CON 226°	SHA 145° CON 055°	SHA 325° CON 235°	0	0	0	1
4187	61	(For this question refer to annex 061-12599A) Given: CRK VOR/DME (N5150.4 W00829.7) Kerry aerodrome (N5210.9 W00931.4)	119° - 44 NM	127° - 45 NM	299° - 42 NM	307° - 43 NM	0	0	0	1
4188	61	Which of the following lists, which compares an Inertial Reference System that utilises Ring Laser Gyroscopes (RLG) instead of conventional gyroscopes, is completely correct?	The platform is kept stable relative to the earth mathematically rather than mechanically but it has a longer 'spin up' time	It does not suffer from 'lock in' error and it is insensitive to gravitational ('g') forces	There is little or no 'spin up' time and it does not suffer from 'lock in' error	There is little or no 'spin up' time and it is insensitive to gravitational ('g') forces	0	0	0	1
4189	61	Gyrocompassing of an inertial reference system (IRS) is accomplished with the mode selector switched to:	ON	ALIGN	STBY	ATT/REF	0	1	0	0
4190	61	With reference to an inertial navigation system (INS), the initial great circle track between computer inserted waypoints will be displayed when the control display unit (CDU) is selected to:	HDG/DA	TK/GS	XTK/TKE	DSRTK/STS	0	0	0	1

4191	61	Which of the following statement is correct concerning gyro-compassing of an inertial navigation system (INS)?	Gyro-compassing of an INS is not possible in flight because it cannot differentiate between movement induced and misalignment induced accelerations.	Gyro-compassing of an INS is possible in flight because it can differentiate between movement induced and misalignment induced accelerations.	Gyro-compassing of an INS is possible in flight because it cannot differentiate between movement induced and misalignment induced accelerations.	Gyro-compassing of an INS is not possible in flight because it can differentiate between movement induced and misalignment induced accelerations.	1	0	0	0
4192	61	During the initial alignment of an inertial navigation system (INS) the equipment:	will accept a 10° error in initial latitude and initial longitude	will not accept a 10° error in initial latitude but will accept a 10° error in initial longitude	will accept a 10° error in initial latitude but will not accept a 10° error in initial longitude	will not accept a 10° error in initial latitude or initial longitude	0	1	0	0
4193	61	Double integration of the output from the east/west accelerometer of an inertial navigation system (INS) in the NAV MODE give:	velocity east/west	distance east/west	vehicle longitude	distance north/south	0	1	0	0
4194	61	(For this question use annex 061-12576A) What is the average track (°T) and distance between BAL VOR (N5318.0 W00626.9) and CRN NDB (N5318.1	268° - 91 NM	272° - 89 NM	270° - 90 NM	278° - 89 NM	0	0	1	0
4195	61	The principle of 'Schuler Tuning' as applied to the operation of Inertial Navigation Systems/ Inertial Reference Systems is applicable to:	both gyro-stabilised platform and 'strapdown' systems	only gyro-stabilised systems	both gyro-stabilised and laser gyro systems but only when operating in the non 'strapdown' mode	only to 'strapdown' laser gyro systems	1	0	0	0
4196	61	The automatic flight control system is coupled to the guidance outputs from an inertial navigation system. Which pair of latitudes will give the greatest difference between initial track read-out and the average true course given, in each case, a difference of longitude of 10°?	60°N to 60°N	60°N to 50°N	30°S to 30°N	30°S to 25°S	1	0	0	0
4197	61	The resultant of the first integration of the output from the east/west accelerometer of an inertial navigation system (INS) in NAV MODE is:	change of longitude	vehicle longitude	departure	velocity along the local parallel of latitude	0	0	0	1
4198	61	One of the errors inherent in a ring laser gyroscope occurs at low input rotation rates tending towards zero when a phenomenon known as 'lock-in' is experienced. What is the name of the technique, effected by means of a piezo-electric motor, that is used to correct this error?	cavity rotation	zero drop	beam lock	dither	0	0	0	1
4199	61	(For this question use annex 061-9442A) Complete line 6 of the 'FLIGHT NAVIGATION LOG', positions 'L' to 'M'.	HDG 064° - ETA 1449 UTC	HDG 075° - ETA 1452 UTC	HDG 070° - ETA 1459 UTC	HDG 075° - ETA 1502 UTC	0	0	0	1
4200	61	(For this question use annex 061-9441A) Complete line 5 of the 'FLIGHT NAVIGATION LOG', positions 'J' to 'K'.	HDG 337° - ETA 1422 UTC	HDG 320° - ETA 1412 UTC	HDG 337° - ETA 1322 UTC	HDG 320° - ETA 1432 UTC	1	0	0	0

4201	61	(For this question use annex 061-9440A) Complete line 4 of the 'FLIGHT NAVIGATION LOG', positions 'G' to 'H'.	HDG 344° - ETA 1303 UTC	HDG 344° - ETA 1336 UTC	HDG 354° - ETA 1326 UTC	HDG 034° - ETA 1336 UTC	0	1	0	0
4202	61	(For this question use annex 061-9439A) Complete line 3 of the 'FLIGHT NAVIGATION LOG', positions 'E' to 'F'.	HDG 095° - ETA 1155 UTC	HDG 106° - ETA 1215 UTC	HDG 115° - ETA 1145 UTC	HDG 105° - ETA 1205 UTC	0	0	0	1
4203	61	The resultant of the first integration from the north/south accelerometer of an inertial navigation system (INS) in the NAV MODE is:	change latitude	latitude	velocity along the local meridian	groundspeed	0	0	1	0
4204	61	Given: ILS GP angle = 3.5 DEG, GS = 150 kt	900 FT/MIN	1000 FT/MIN	700 FT/MIN	800 FT/MIN	1	0	0	0
4205	61	(For this question refer to annex 061-12605A) What feature is shown on the chart at position N5212	Clonbullogue aerodrome	TUSKAR ROCK LT.H. NDB	WTD NDB	KERRY/Farranfore aerodrome	0	1	0	0
4206	61	(For this question use annex 061-12573A) What is the average track (°T) and distance between WTD NDB (N5211.3 W00705.0) and FOY NDB (N5234.0	286° - 81 NM	294° - 80 NM	075° - 81 NM	277° - 83 NM	1	0	0	0
4207	61	(For this question use annex 061-12572A) What is the average track (°T) and distance between SLG NDB (N5416.7 W00836.0) and CRN NDB (N5502.6	011° - 47 NM	020° - 46 NM	348° - 46 NM	191° - 45 NM	1	0	0	0
4208	61	(For this question use annex 061-12571A) What is the average track (°T) and distance between CON VOR (N5354.8 W00849.1) and BEL VOR (N5439.7	113° - 97 NM	293° - 98 NM	063° - 101 NM	071° - 100 NM	0	0	1	0
4209	61	(For this question use annex 061-12570A) What is the average track (°M) and distance between CRN NDB (N5318.1 W00856.5) and BEL VOR (N5439.7	089° - 95 NM	229° - 125 NM	237° - 130 NM	057° - 126 NM	0	0	0	1
4210	61	(For this question use annex 061-12569A) What is the average track (°M) and distance between BAL VOR (N5318.0 W00626.9) and SLG NDB (N5416.7	262° - 86 NM	128° - 99 NM	308° - 98 NM	316° - 96 NM	0	0	0	1
4211	61	The following points are entered into an inertial navigation system (INS). WPT 1: 60°N 30°W WPT 2: 60°N 20°W WPT 3: 60°N 10°W The inertial navigation system is connected to the automatic	zero	a 9° increase	a 4° decrease	a 9° decrease	0	0	0	1
4212	61	Given: aircraft height 2500 FT, ILS GP angle 3°.	8.3 NM	7.0 NM	13.1 NM	14.5 NM	1	0	0	0
4213	61	The automatic flight control system (AFCS) in an aircraft is coupled to the guidance outputs from an inertial navigation system (INS) and the aircraft is flying from waypoint No. 2 (60°00'S 070°00'W) to No. 3 (60°00'S 080°00'W). Comparing the initial track (°T) at 070°00'W and the final track (°T) at 080°00'W, the difference between them is that the initial track is approximately:	9° greater than the final one	5° less than the final one	9° less than the final one	5° greater than the final one	0	0	1	0
4214	61	Given: TAS = 197 kt, True course = 240°, W/V = 180/30kt. Descent is initiated at FL 220 and completed at FL 40.	800 FT/MIN	950 FT/MIN	1500 FT/MIN	1400 FT/MIN	0	0	0	1

4215	61	What is the effect on the Mach number and TAS in an aircraft that is climbing with constant CAS?	Mach number remains constant; TAS increases	Mach number decreases; TAS decreases	Mach number increases; TAS remains constant	Mach number increases; TAS increases	0	0	0	1
4216	61	Which of the following statements concerning the earth's magnetic field is completely correct?	Dip is the angle between total magnetic field and vertical field component	The blue pole of the earth's magnetic field is situated in North Canada	At the earth's magnetic equator, the inclination varies depending on whether the geograhic equator is north or south of the magnetic equator	The earth's magnetic field can be classified as transient, semi-permanent or permanent	0	1	0	0
4217	61	Which of the following correctly lists the order of available selections of the Mode Selector switches of an inertial reference system (IRS) mode panel?	OFF - ALIGN - NAV - ATT	OFF - ON - ALIGN - NAV	OFF - STBY - ALIGN - NAV	OFF - ALIGN - ATT - NAV	1	0	0	0
4218	61	The automatic flight control system (AFCS) in an aircraft is coupled to the guidance outputs from an inertial navigation system (INS). The aircraft is flying between inserted waypoints No. 3 (55°00'N 020°00'W) and No. 4 (55°00'N 030°00'W). With DSRTK/STS selected on the CDU, to the nearest whole degree, the initial track read-out from waypoint No. 3 will be:	266°	270°	274°	278°	0	0	1	0
4219	61	(For this question use annex 061-12575A) What is the average track (°T) and distance between SHA VOR (N5243.3 W00853.1) and CON VOR (N5354.8	010° - 71 NM	358° - 72 NM	006° - 71 NM	002° - 72 NM	0	0	0	1
4220	61	(For this question use annex 061-12568A) What is the average track (°M) and distance between KER NDB (N5210.9 W00931.5) and CRN NDB (N5318.1	205° - 71 NM	017° - 70 NM	025° - 70 NM	197° - 71 NM	0	0	1	0
4221	61	The direct reading magnetic compass is made aperiodic (dead beat) by:	using long magnets	pendulous suspension of the magnetic assembly	keeping the magnetic assembly mass close to the compass point and by using damping wires	using the lowest acceptable viscosity compass liquid	0	0	1	0
4222	61	(For this question refer to annex 061-12603A) Given: CON VOR/DME (N5354.8 W00849.1) Abbey Shrule aerodrome (N5335 W00739)	296° - 46 NM	304° - 47 NM	124° - 46 NM	116° - 47 NM	0	0	1	0
4223	61	What is the validity period of the 'permanent' data base of aeronautical information stored in the FMC In the B737-400 Flight Management System?	28 days	one calendar month	3 calendar months	14 days	1	0	0	0
4224	61	What indication, if any, is given in the B737-400 Flight Management System if radio updating is not available?	A warning message is displayed on the Flight Director System	No indication is given so long as the IRS positions remain within limits	A warning message is displayed on the EHSI and MFDU	A warning message is displayed on the IRS displays	0	0	1	0

4225	61	Which component of the B737-400 Flight Management System (FMS) is used to enter flight plan routeing and performance parameters?	Multi-Function Control Display Unit	Flight Management Computer	Inertial Reference System	Flight Director System	1	0	0	0
4226	61	The purpose of the Flight Management System (FMS), as for example installed in the B737-400, is to provide:	both manual navigation guidance and performance management	continuous automatic navigation guidance and performance management	manual navigation guidance and automatic performance management	continuous automatic navigation guidance as well as manual performance management	0	1	0	0
4227	61	How is the radio position determined by the FMC in the B737-400 Electronic Flight Instrument System?	DME/DME	DME/DME or VOR/DME	DME ranges and/ or VOR/ADF bearings	VOR/DME range and bearing	1	0	0	0
4228	61	A direct reading compass should be swung when:	the aircraft has made more than a stated number of landings	there is a large, and permanent, change in magnetic latitude	there is a large change in magnetic longitude	the aircraft is stored for a long period and is frequently moved	0	1	0	0
4229	61	In which of the following situations is the FMC present position of a B737-400 Electronic Flight Instrument System likely to be least accurate?	Just after take-off	At top of climb	At top of descent	On final approach	1	0	0	0
4230	61	The annunciator of a remote indicating compass system is used when:	synchronising the magnetic and gyro compass elements	compensating for deviation	setting local magnetic variation	setting the 'heading' pointer	1	0	0	0
4231	61	The convergence factor of a Lambert conformal conic chart is quoted as 0.78535. At what latitude on the chart is earth convergency correctly	38°15'	51°45'	52°05'	80°39'	0	1	0	0
4232	61	At 47° North the chart distance between meridians 10° apart is 5 inches.	1 : 8 000 000	1 : 3 000 000	1 : 2 500 000	1 : 6 000 000	0	0	0	1
4233	61	On a Direct Mercator chart a great circle will be represented by a:	curve convex to the equator	straight line	curve concave to the equator	complex curve	0	0	1	0
4234	61	An aircraft in the northern hemisphere is making an accurate rate one turn to the right. If the initial heading was 135°, after 30 seconds the direct reading magnetic compass should read:	225°	less than 225°	more or less than 225° depending on the pendulous suspension used	more than 225°	0	0	0	1
4235	61	When accelerating on a westerly heading in the northern hemisphere, the compass card of a direct reading magnetic compass will turn:	clockwise giving an apparent turn towards the north	clockwise giving an apparent turn towards the south	anti-clockwise giving an apparent turn towards the north	anti-clockwise giving an apparent turn towards the south	0	0	1	0
4236	61	On a Lambert conformal conic chart, with two standard parallels, the quoted scale is correct:	along the prime meridian	along the two standard parallels	in the area between the standard parallels	along the parallel of origin	0	1	0	0
4237	61	(For this question refer to annex 061-12615A) Which of the aeronautical chart symbols indicates a DME?	6	2	3	5	0	1	0	0
4238	61	(For this question refer to annex 061-12623A) Which aeronautical chart symbol indicates a Control Zone	2	3	4	5	0	1	0	0
4239	61	(For this question refer to annex 061-12621A) Which aeronautical chart symbol indicates a Flight	1	3	4	5	1	0	0	0

4240	61	(For this question refer to annex 061-12620A) Which of the aeronautical chart symbols indicates a	3	6	7	1	0	0	1	0
4241	61	(For this question refer to annex 061-12619A) Which of the aeronautical chart symbols indicates a TACAN?	6	7	1	2	1	0	0	0
4242	61	(For this question refer to annex 061-12618A) Which of the aeronautical chart symbols indicates a basic,	5	6	2	3	1	0	0	0
4243	61	In the B737-400 Flight Management System the CDUs are used during preflight to:	manually initialize the IRSs, FMC and Autothrottle with dispatch information	manually initialize the IRSs and FMC with dispatch information	automatically initialize the IRSs and FMC with dispatch information	manually initialize the Flight Director System and FMC with dispatch information	0	1	0	0
4244	61	(For this question refer to annex 061-12616A) Which of the aeronautical chart symbols indicates a VOR?	3	5	6	2	1	0	0	0
4245	61	(For this question refer to annex 061-12613A) Which of the following lists all the aeronautical chart symbols	VOR: NDB	civil airport: ILS	NDB: ILS	civil airport: NDB	0	0	0	1
4246	61	(For this question refer to annex 061-12614A) Which of the aeronautical chart symbols indicates a	6	7	1	2	0	0	1	0
4247	61	Which of the following lists the first three pages of the FMC/CDU normally used to enter data on initial start-up of the B737-400 Electronic Flight Instrument System?	POS INIT - RTE - IDENT	IDENT - RTE - DEPARTURE	POS INIT - RTE - DEPARTURE	IDENT - POS INIT - RTE	0	0	0	1
4248	61	Which FMC/CDU page normally appears on initial power application to the B737-400 Electronic Flight Instrument System?	INITIAL	POS INIT	PERF INIT	IDENT	0	0	0	1
4249	61	Which of the following lists all the methods that can be used to enter 'Created Waypoints' into the CDU of a B737-400 Electronic Flight Instrument System?	Identifier bearing/distance; place distance/place distance; along-track displacement; latitude and longitude	Identifier bearing/distance; place bearing/place bearing; along-track displacement; latitude and longitude	Identifier bearing/distance; place bearing/place distance; along/across-track displacement; latitude and longitude	Identifier bearing/distance; place bearing/place bearing; latitude and longitude; waypoint name	0	1	0	0
4250	61	Which of the following can all be stored as five letter waypoint identifiers through the CDU of a B737-400 Electronic Flight Instrument System?	Waypoint names; navaid frequencies; runway codes; airport ICAO identifiers	Waypoint names; navaid positions; airport ICAO identifiers; airport names	Waypoint names; navaid identifiers; runway numbers; airport ICAO identifiers	Airway names; navaid identifiers; airport names; waypoint code numbers	0	0	1	0
4251	61	What are, in order of highest priority followed by lowest, the two levels of message produced by the CDU of the B737-400 Electronic Flight Instrument System?	Urgent and Routine	Priority and Alerting	Urgent and Advisory	Alerting and Advisory	0	0	0	1
4252	61	(For this question refer to annex 061-12617A) Which of the aeronautical chart symbols indicates an NDB?	2	3	4	6	0	0	1	0
4253	61	ATT Mode of the Inertial Reference System (IRS) is a back-up mode providing:	only attitude information	navigation information	altitude, heading and position information	only attitude and heading information	0	0	0	1

4254	61	Permanent magnetism in aircraft arises chiefly from:	the combined effect of aircraft electrical equipment and the earth's magnetic field	the effect of internal wiring and exposure to electrical storms	hammering, and the effect of the earth's magnetic field, whilst under construction	exposure to the earth's magnetic field during normal operation	0	0	1	0
4255	61	An island appears 30° to the left of the centre line on an airborne weather radar display. What is the true bearing of the aircraft from the island if at the time of observation the aircraft was on a magnetic heading (MH) of 020° with the magnetic variation (VAR) 25°W?	325°	145°	195°	205°	0	1	0	0
4256	61	An island appears 30° to the right of the centre line on an airborne weather radar display. What is the true bearing of the aircraft from the island if at the time of observation the aircraft was on a magnetic heading (MH) of 355° with the magnetic variation (VAR) 15°E?	130°	160°	190°	220°	0	0	0	1
4257	61	An island appears 45° to the right of the centre line on an airborne weather radar display. What is the true bearing of the aircraft from the island if at the time of observation the aircraft was on a magnetic heading (MH) of 215° with the magnetic variation (VAR) 21°W?	329°	059°	101°	239°	0	1	0	0
4258	61	An island appears 60° to the left of the centre line on an airborne weather radar display. What is the true bearing of the aircraft from the island if at the time of observation the aircraft was on a magnetic heading (MH) of 276° with the magnetic variation (VAR) 10°E?	086°	226°	026°	046°	0	0	0	1
4259	61	Waypoints can be entered in an INS memory in different formats. In which of the following formats can waypoints be entered	bearing and distance	hexadecimal	by waypoints name	geographic coordinates	0	0	0	1
4260	61	Which of the following statements concerning the position indicated on the Inertial Reference System (IRS) display is correct?	The positions from the two IRSs are compared to obtain a 'best position' which is displayed on the IRS	It is not updated once the IRS mode is set to NAV	It is constantly updated from information obtained by the FMC	It is updated when 'go-around' is selected on take-off	0	1	0	0
4261	61	What additional information is required to be input to an Inertial Navigation System (INS) in order to obtain an W/V readout?	Mach Number	TAS	IAS	Altitude and OAT	0	1	0	0
4262	61	An aircraft departs from position A (04°10' S 178°22'W) and flies northward following the meridian for 2950 NM. It then flies westward along the parallel of latitude for 382 NM to position B.	53°20'N 172°38'E	45°00'N 172°38'E	53°20'N 169°22W	45°00'N 169°22W	0	1	0	0
4263	61	The angle between the true great-circle track and the true rhumb-line track joining the following points: A (60° S 165° W) B (60° S 177° E), at the place of departure A, is:	7.8°	9°	15.6°	5.2°	1	0	0	0
4264	61	Given: Waypoint 1. 60°S 030°W Waypoint 2. 60°S 020°W What will be the approximate latitude shown on the display unit of an inertial navigation system at longitude 025°W?	060°11'S	059°49'S	060°00'S	060°06'S	0	0	0	1
4265	61	What is the time required to travel along the parallel of latitude 60° N between meridians 010° E and 030° W at a groundspeed of 480 kt?	5 HR 00 MIN	2 HR 30 MIN	1 HR 15 MIN	1 HR 45 MIN	0	1	0	0
4266	61	(For this question refer to annex 061-12607A) What feature is shown on the chart at position N5351	Brittas Bay aerodrome	Castlebar aerodrome	Connaught aerodrome	Connemara aerodrome	0	1	0	0

4267	61	(For this question refer to annex 061-12606A) What feature is shown on the chart at position N5311	Punchestown aerodrome	Connemara aerodrome	KERRY/Farranfore aerodrome	Clonbullogue aerodrome	1	0	0	0
4268	61	Which of the following statements concerning the loss of alignment by an Inertial Reference System (IRS) in flight is correct?	It is not usable in any mode and must be shut down for the rest of the flight	The navigation mode, including present position and ground speed outputs, is inoperative for the remainder of the flight	The IRS has to be coupled to the remaining serviceable system and a realignment carried out in flight	The mode selector has to be rotated to ATT then back through ALIGN to NAV in order to obtain an in-flight realignment	0	1	0	0
4269	61	The two standard parallels of a conical Lambert projection are at N10°40'N and N41°20'. The cone constant of this chart is approximatively :	0.90	0.66	0.18	0.44	0	0	0	1
4270	61	Given: Distance 'A' to 'B' is 90 NM, Fix obtained 60 NM along and 4 NM to the right of course. What heading alteration must be made to reach 'B'?	4° Left	8° Left	12° Left	16° Left	0	0	1	0
4271	61	(For this question refer to annex 061-12612A) Which of the following lists all the aeronautical chart symbols shown at position N5318.1 W00856.5?	VOR: DME: NDB: compulsory reporting point	civil airport: VOR: DME: non-compulsory reporting point	VOR: DME: NDB: compulsory reporting point	civil airport: NDB: DME: non-compulsory reporting point	0	0	0	1
4272	61	(For this question refer to annex 061-12611A) Which of the following lists all the aeronautical chart symbols shown at position N5416.7 W00836.0?	civil airport: NDB: DME: compulsory reporting point	VOR: DME: NDB: compulsory reporting point	civil airport: VOR: DME: non-compulsory reporting point	VOR: DME: NDB: non-compulsory reporting point	1	0	0	0
4273	61	(For this question refer to annex 061-12610A) Which of the following lists all the aeronautical chart symbols shown at position N5318.0 W00626.9?	military airport: VOR: NDB	VOR: DME: danger area	military airport: VOR: DME	civil airport: VOR: DME	0	0	1	0
4274	61	(For this question refer to annex 061-12609A) Which of the following lists all the aeronautical chart symbols shown at position N5150.4 W00829.7?	VOR: DME: NDB:compulsory reporting point	VOR: DME: NDB: ILS	civil airport: VOR: DME: compulsory reporting point	civil airport: VOR: non-compulsory reporting point	0	0	1	0
4275	61	(For this question refer to annex 061-12608A) What feature is shown on the chart at position N5417	Belmullet aerodrome	Carnmore aerodrome	Clonbullogue aerodrome	EAGLE ISLAND LT.H. NDB	0	0	0	1
4276	61	The main reason for usually mounting the detector unit of a remote indicating compass in the wingtip of an aeroplane is to:	place it where it will not be subjected to electrical or magnetic interference from the aircraft	reduce the amount of deviation caused by aircraft magnetism and electrical circuits	facilitate easy maintenance of the unit and increase its exposure to the Earth's magnetic field	place it in a position where there is no electrical wiring to cause deviation errors	0	1	0	0
4277	61	Given: Position 'A' is N00° E100°, Position 'B' is 240°(T), 200 NM from 'A'	N01°40' E101°40'	S01°40' E097°07'	N01°40' E097°07'	S01°40' E101°40'	0	1	0	0
4278	61	The main advantage of a remote indicating compass over a direct reading compass is that it:	requires less maintenance	is able to magnify the earth's magnetic field in order to attain greater accuracy	senses, rather than seeks, the magnetic meridian	has less moving parts	0	0	1	0

4279	61	Which of the following statements concerning the aircraft positions indicated on a triple fit Inertial Navigation System (INS)/ Inertial Reference System (IRS) on the CDU is correct?	The positions will be the same because they are an average of three different positions	The positions will only differ if one of the systems has been decoupled because of a detected malfunction	The positions will only differ if an error has been made when inputting the present position at the departure air port	The positions are likely to differ because they are calculated from different sour ces	0	0	0	1
4280	61	Which of the following statements concerning the operation of an Inertial Navigation System (INS)/Inertial Reference System (IRS) is correct?	NAV mode must be selected prior to movement of the aircraft off the gate	NAV mode must be selected on the runway just prior to take-off	NAV mode must be selected prior to the loading of passengers and/or freight	NAV mode must be selected when the alignment procedure is commenced	1	0	0	0
4281	61	Which of the following statements concerning the alignment procedure for Inertial Navigation Systems(INS)/Inertial Reference Systems (IRS) at mid-latitudes is correct?	INS/IRS can only be aligned in NAV mode	INS/IRS can be aligned in either the ALIGN or NAV mode	INS/IRS can only be aligned in the ALIGN mode	INS/IRS can be aligned in either the ALIGN or ATT mode	0	1	0	0
4282	61	The alignment time, at mid-latitudes, for an Inertial Reference System using laser ring gyros is approximately:	5 MIN	10 MIN	20 MIN	2 MIN	0	1	0	0
4283	61	What is the name given to an Inertial Reference System (IRS) which has the gyros and accelerometers as part of the unit's fixture to the aircraft structure?	Solid state	Ring laser	Strapdown	Rigid	0	0	1	0
4284	61	The sensors of an INS measure:	precession	acceleration	velocity	the horizontal component of the earth's rotation	0	1	0	0
4285	61	A pilot accidently turning OFF the INS in flight, and then turns it back ON a few moments later. Following this incident:	the INS is usable in NAV MODE after a position update	it can only be used for attitude reference	no useful information can be obtained from the INS	everything returns to normal and is usable	0	1	0	0
4286	61	The chart that is generally used for navigation in polar areas is based on a:	Direct Mercator projection	Gnomonic projection	Lambert conformal projection	Stereographic al projection	0	0	0	1
4287	61	(For this question use annex 061-9438A) Complete line 2 of the 'FLIGHT NAVIGATION LOG', positions 'C' to 'D'.	HDG 193° - ETA 1239 UTC	HDG 188° - ETA 1229 UTC	HDG 193° - ETA 1249 UTC	HDG 183° - ETA 1159 UTC	1	0	0	0
4288	61	Position A is located on the equator at longitude 130°00E. Position B is located 100 NM from A on a bearing of 225°(T). The coordinates of position B are:	01°11'N 128°49'E	01°11'S 128°49'E	01°11'N 131°11'E	01°11'S 131°11'E	0	1	0	0
4289	61	In order to fly from position A (10°00'N, 030°00'W) to position B (30°00'N, 050°00'W), maintaining a constant true course, it is necessary to fly:	the great-circle route	a straight line plotted on a Lambert chart	a rhumb line track	the constant average drift route	0	0	1	0
4290	61	The rhumb line track between position A (45°00'N, 010°00'W) and position B (48°30'N, 015°00'W) is approximately:	345	315	330	300	0	1	0	0
4291	61	The diameter of the Earth is approximately:	40 000 km	12 700 km	6 350 km	18 500 km	0	1	0	0
4292	61	(For this question refer to annex 061-12624A) Which aeronautical chart symbol indicates an uncontrolled	3	4	5	2	0	1	0	0

4293	61	The nominal scale of a Lambert conformal conic chart is the:	scale at the equator	scale at the standard parallels	mean scale between pole and equator	mean scale between the parallels of the secant cone	0	1	0	0
4294	61	(For this question refer to annex 061-12625A) Which aeronautical chart symbol indicates the boundary of	2	3	4	5	0	0	0	1
4295	61	A Mercator chart has a scale at the equator = 1 : 3 704 000. What is the scale at latitude 60° S?	1 : 3 208 000	1 : 185 200	1 : 1 852 000	1 : 7 408 000	0	0	1	0
4296	61	The distance measured between two points on a navigation map is 42 mm (millimetres). The scale of the chart is 1:1 600 000. The actual distance between these two point is	370.00 NM	67.20 NM	3.69 NM	36.30 NM	0	0	0	1
4297	61	The standard parallels of a Lambert's conical orthomorphic projection are 07°40'N and 38°20' N.	0.42	0.39	0.60	0.92	0	1	0	0
4298	61	On a Lambert conformal conic chart the convergence of the meridians:	is zero throughout the chart	varies as the secant of the latitude	equals earth convergency at the standard parallels	is the same as earth convergency at the parallel of origin	0	0	0	1
4299	61	A straight line drawn on a chart measures 4.63 cm and represents 150 NM.	1 : 6 000 000	1 : 3 000 000	1 : 5 000 000	1 : 1 000 000	1	0	0	0
4300	61	On a Polar Stereographic chart, the initial great circle course from A 70° N 060°W to B 70°N 060°E is approximately:	030° (T)	330° (T)	150° (T)	210° (T)	1	0	0	0
4301	61	The maximum difference between geocentric and geodetic latitude occurs at about:	90° North and South	0° North and South (equator)	45° North and South	60° North and South	0	0	1	0
4302	61	(For this question refer to annex 061-12632A) Which aeronautical chart symbol indicates a group of lighted	9	10	11	12	0	0	0	1
4303	61	A course of 120°(T) is drawn between 'X' (61°30'N) and 'Y' (58°30'N) on a Lambert Conformal conic chart with a scale of 1 : 1 000 000 at 60°N. The chart distance between 'X' and 'Y' is:	66.7 cm	33.4 cm	38.5 cm	36.0 cm	1	0	0	0
4304	61	(For this question refer to annex 061-12638A) Which aeronautical chart symbol indicates a lightship?	14	16	10	12	0	1	0	0
4305	61	(For this question refer to annex 061-12637A) Which aeronautical chart symbol indicates an aeronautical	15	16	10	14	1	0	0	0
4306	61	(For this question refer to annex 061-12636A) What is the meaning of aeronautical chart symbol No. 16?	Shipwreck showing above the surface at low tide	Off-shore lighthouse	Lightship	Off-shore helicopter landing platform	0	0	1	0
4307	61	(For this question refer to annex 061-12635A) What is the meaning of aeronautical chart symbol No. 15?	Hazard to aerial navigation	Lighthouse	Aeronautical ground light	Visual reference point	0	0	1	0
4308	61	Given: value for the ellipticity of the Earth is 1/297. Earth's semi-major axis, as measured at the equator, equals 6378.4 km.	6 378.4	6 367.0	6 399.9	6 356.9	0	0	0	1
4309	61	(For this question refer to annex 061-12633A) Which aeronautical chart symbol indicates an exceptionally	9	11	13	14	0	0	1	0
4310	61	On a Lambert Conformal Conic chart great circles that are not meridians are:	curves concave to the pole of projection	straight lines within the standard parallels	curves concave to the parallel of origin	straight lines regardless of distance	0	0	1	0
4311	61	(For this question refer to annex 061-12631A) Which aeronautical chart symbol indicates a group of	9	11	12	13	0	1	0	0

4312	61	(For this question refer to annex 061-12630A) Which aeronautical chart symbol indicates a lighted	9	10	11	12	0	1	0	0
4313	61	(For this question refer to annex 061-12629A) Which aeronautical chart symbol indicates an unlighted	12	9	10	11	0	1	0	0
4314	61	(For this question refer to annex 061-12628A) Which aeronautical chart symbol indicates a Way-point?	15	6	7	8	0	0	0	1
4315	61	(For this question refer to annex 061-12627A) Which aeronautical chart symbol indicates a compulsory	8	15	6	7	0	0	0	1
4316	61	(For this question refer to annex 061-12626A) Which aeronautical chart symbol indicates a non-compulsory	15	6	7	8	0	1	0	0
4317	61	(For this question refer to annex 061-12634A) Which aeronautical chart symbol indicates an exceptionally	14	10	12	13	1	0	0	0
4318	61	What is the longitude of a position 6 NM to the east of 58°42'N 094°00'W?	093°53.1'W	094°12.0'W	093°48.5'W	093°54.0'W	0	0	1	0
4319	61	Given: True Heading = 090° TAS = 180 kt GS = 180 kt	360° / 15 kt	190° / 15 kt	010° / 15 kt	180° / 15 kt	1	0	0	0
4320	61	Given: True Heading = 090° TAS = 200 kt	180 kt	200 kt	220 kt	230 kt	0	0	1	0
4321	61	An aeroplane is flying at TAS 180 kt on a track of 090°. The W/V is 045° / 50kt. How far can the aeroplane fly out from its base and return in one hour?	85 NM	88 NM	56 NM	176 NM	1	0	0	0
4322	61	The following information is displayed on an Inertial Navigation System: GS 520 kt, True HDG 090°, Drift angle 5° right,	220° / 60 kt	325° / 60 kt	320° / 60 kt	225° / 60 kt	0	0	1	0
4323	61	The reported surface wind from the Control Tower is 240°/35 kt. Runway 30 (300°).	30 kt	24 kt	27 kt	21 kt	1	0	0	0
4324	61	On a Direct Mercator chart, a rhumb line appears as a:	small circle concave to the nearer pole	spiral curve	curve convex to the nearer pole	straight line	0	0	0	1
4325	61	A great circle track joins position A (59°S 141°W) and B (61°S 148°W). What is the difference between the great circle track at A	It increases by 6°	It decreases by 6°	It increases by 3°	It decreases by 3°	1	0	0	0
4326	61	Given: True Heading = 180° TAS = 500 kt	435 kt	600 kt	535 kt	450 kt	1	0	0	0
4327	61	A pilot receives the following signals from a VOR DME station: radial 180°+/- 1°, distance = 200 NM.	+/- 2 NM	+/- 7 NM	+/- 3.5 NM	+/- 1 NM	0	0	1	0
4328	61	An aircraft is maintaining a 5.2% gradient is at 7 NM from the runway, on a flat terrain; its height is approximately:	3640 FT	2210 FT	680 FT	1890 FT	0	1	0	0

4329	61	A useful method of a pilot resolving, during a visual flight, any uncertainty in the aircraft's position is to maintain visual contact with the ground and:	fly the reverse of the heading being flown prior to becoming uncertain until a pinpoint is obtained	fly expanding circles until a pinpoint is obtained	fly reverse headings and associated timings until the point of departure is regained	set heading towards a line feature such as a coastline, motorway, river or railway	0	0	0	1
4330	61	(For this question use annex 061-12405A) Which of the following beacons is 185 NM from AKRABERG	KIRKWALL (N5858 W00254)	STORNOWAY (N5815 W00617)	SUMBURGH (N5955 W00115)	SAXAVORD (N6050 W00050)	0	0	1	0
4331	61	(For this question use annex 061-12404A) An aircraft on radial 110° at a range of 120 NM from SAXAVORD VOR (N6050 W00050) is at position:	N6127 W00443	N6010 E00255	N6109 E00255	N6027 E00307	0	0	0	1
4332	61	(For this question use annex 061-12403A) An aircraft on radial 315° at a range of 150 NM from MYGGENES NDB (N6206 W00732) is at position:	N6320 W01205	N6020 W00405	N6345 W01125	N6040 W00320	1	0	0	0
4333	61	An aircraft passes position A (60°00'N 120°00'W) on route to position B (60°00'N 140°30'W). What is the great circle track on departure from A?	279°	288°	261°	270°	1	0	0	0
4334	61	Given the following: True track: 192° Magnetic variation: 7°E Drift angle: 5° left	180°	190°	194°	204°	0	1	0	0
4335	61	An aircraft equipped with an Inertial Navigation System (INS) flies with INS 1 coupled with autopilot 1. Both inertial navigation systems are navigating from way-point A to B. The inertial systems' Central Display Units (CDU) sho shows: - XTK on INS 1 = 0 - XTK on INS 2 = 8L (XTK = cross track)	only inertial navigation system No. 1 is drifting	the autopilot is unserviceable in NAV mode	at least one of the inertial navigaton systems is drifting	only inertial navigation system No. 2 is drifting	0	0	1	0
4336	61	On a direct Mercator projection, at latitude 45° North, a certain length represents 70 NM. At latitude 30° North, the same length represents	57 NM	70 NM	81 NM	86 NM	0	0	0	1
4337	61	Given: Position A 45°N, ?°E Position B 45°N, 45°15'E Distance A-B = 280 NM	38°39'E	49°57'E	51°51'E	40°33'E	1	0	0	0
4338	61	On a polar stereographic projection chart showing the South Pole, a straight line joins position A (70°S 065°E) to position B (70°S 025°W). The true course on departure from position A is	315°	225°	250°	135°	0	1	0	0
4339	61	On a direct Mercator projection, the distance measured between two meridians spaced 5° apart at latitude 60°N is 8 cm. The scale of this chart at latitude 60°N is approximately:	1 : 4 750 000	1 : 7 000 000	1 : 6 000 000	1 : 3 500 000	0	0	0	1
4340	61	Two positions plotted on a polar stereographic chart, A (80°N 000°) and B (70°N 102°W) are joined by a straight line whose highest latitude is reached at 035°W. At point B, the true course is:	023°	247°	305°	203°	0	0	0	1
4341	61	If an aeroplane was to circle around the Earth following parallel 60°N at a ground speed of 480 kt. In order to circle around the Earth along the equator in the same amount of time, it should fly at a ground speed of:	240 kt	550 kt	480 kt	960 kt	0	0	0	1

4342	61	Given: Magnetic heading 311° Drift angle 10° left Relative bearing of NDB 270°	208°	211°	180°	221°	0	0	0	1
4343	61	Given: True heading = 310° TAS = 200 kt GS = 176 kt	090° / 33 kt	180° / 33 kt	270° / 33 kt	360° / 33 kt	0	0	1	0
4344	61	Given the following: Magnetic heading: 060° Magnetic variation: 8°W	048°	072°	056°	064°	0	0	1	0
4345	61	An aircraft is following a true track of 048° at a constant TAS of 210 kt. The wind velocity is 350° / 30 kt.	192 kt, 7° right	200 kt, 3.5° right	192 kt, 7° left	225 kt, 7° left	1	0	0	0
4346	61	Given: FL 350, Mach 0.80, OAT -55°C.	461 kt , LSS 296 kt	461 kt , LSS 576 kt	237 kt, LSS 296 kt	490 kt, LSS 461 kt	0	1	0	0
4347	61	For a given track the: Wind component = +45 kt Drift angle = 15° left	-35 kt	-65 kt	-55 kt	-45 kt	0	1	0	0
4348	61	Given: Magnetic heading = 255° VAR = 40°W GS = 375 kt	16° right	7° left	7° right	9° left	0	1	0	0
4349	61	The great circle distance between position A (59°34.1'N 008°08.4'E) and B (30°25.9'N 171°51.6'W) is:	2 700 NM	10 800 NM	5 400 NM	10 800 km	0	0	1	0
4350	61	On a Mercator chart, the scale:	is constant throughout the chart	varies as 1/2 cosine of the co-latitude	varies as 1/cosine of latitude (1/cosine= secant)	varies as the sine of the latitude	0	0	1	0
4351	61	Given: Distance A to B = 120 NM, After 30 NM aircraft is 3 NM to the left of course.	8° right	6° right	4° right	8° left	1	0	0	0
4352	61	Given: Distance 'A' to 'B' 1973 NM Groundspeed 'out' 430 kt Groundspeed 'back' 385 kt	130 MIN	145 MIN	162 MIN	181 MIN	1	0	0	0
4353	61	An aircraft was over 'Q' at 1320 hours flying direct to 'R'. Given: Distance 'Q' to 'R' 3016 NM True airspeed 480 kt Mean wind component 'out' -90 kt Mean wind component 'back' +75 kt	1510 NM	2290 NM	2370 NM	1310 NM	0	1	0	0

4354	61	An aircraft was over 'Q' at 1320 hours flying direct to 'R'. Given: Distance 'Q' to 'R' 3016 NM True airspeed 480 kt Mean wind component 'out' -90 kt	1742	1752	1756	1820	0	1	0	0
4355	61	Given: Distance 'A' to 'B' 2484 NM Mean groundspeed 'out' 420 kt Mean groundspeed 'back' 500 kt Safe endurance 08 HR 30 MIN	1630 NM	1940 NM	1908 NM	1736 NM	0	1	0	0
4356	61	Given: Distance 'A' to 'B' 2484 NM Groundspeed 'out' 420 kt Groundspeed 'back' 500 kt	193 MIN	163 MIN	173 MIN	183 MIN	1	0	0	0
4357	61	An aircraft at latitude 10° South flies north at a GS of 890 km/HR.	22°00'N	03°50'N	02°00'N	12°15'N	0	0	1	0
4358	61	An aircraft was over 'A' at 1435 hours flying direct to 'B'. Given: Distance 'A' to 'B' 2900 NM True airspeed 470 kt Mean wind component 'out' +55 kt	1744	1846	1721	1657	0	0	0	1
4359	61	Given: Distance 'A' to 'B' 2346 NM Groundspeed 'out' 365 kt Groundspeed 'back' 480 kt	290 MIN	219 MIN	197 MIN	209 MIN	1	0	0	0
4360	61	Transverse Mercator projections are used for:	maps of large north/south extent	maps of large east/west extent in equatorial areas	radio navigation charts in equatorial areas	plotting charts in equatorial areas	1	0	0	0
4361	61	An Oblique Mercator projection is used specifically to produce:	topographical maps of large east/west extent	plotting charts in equatorial regions	charts of the great circle route between two points	radio navigational charts in equatorial regions	0	0	1	0
4362	61	On a transverse Mercator chart, with the exception of the Equator, parallels of latitude appear as:	straight lines	hyperbolic lines	parabolas	ellipses	0	0	0	1
4363	61	On a transverse Mercator chart, the scale is exactly correct along the:	meridians of tangency	equator and parallel of origin	meridian of tangency and the parallel of latitude perpendicular to it	prime meridian and the equator	1	0	0	0

4364	61	The main reason for mounting the detector unit of a remote reading compass in the wingtip of an aeroplane is:	to ensure that the unit is in the most accessi ble position on the aircraft for ease of maintenance	by having detector units on both wingtips, to cancel out the deviation effects caused by the aircraft strucure	to minimise the amount of deviation caused by aircraft magnetism and electrical circ uits	to maximise the units exposure to the earth's magnetic field	0	0	1	0
4365	61	Route 'A' (44°N 026°E) to 'B' (46°N 024°E) forms an angle of 35° with longitude 026°E. Average magnetic variation between 'A' and 'B' is 3°E. What is the average magnetic course from 'A' to 'B'?	038°	322°	328°	032°	0	1	0	0
4366	61	An aircraft was over 'A' at 1435 hours flying direct to 'B'. Given: Distance 'A' to 'B' 2900 NM True airspeed 470 kt Mean wind component 'out' +55 kt Mean wind component 'back' -75 kt	2844 NM	2141 NM	1611 NM	1759 NM	0	1	0	0
4367	61	An aircraft is planned to fly from position 'A' to position 'B', distance 480 NM at an average GS of 240 kt. It departs 'A' at 1000 UTC. After flying 150 NM along track from 'A', the aircraft is 2 MIN behind planned time. Using the actual GS experienced, what is the revised ETA at	1157	1206	1203	1153	0	1	0	0
4368	61	(For this question use annex 061-12402A) What are the initial true course and distance between positions N5800 W01300 and N6600 E002002	032° - 470 NM	036° - 638 NM	029° - 570 NM	042° - 635 NM	0	1	0	0
4369	61	Given: Distance 'A' to 'B' is 100 NM, Fix obtained 40 NM along and 6 NM to the left of course. What heading alteration must be made to reach 'B'?	18° Right	15° Right	9° Right	6° Right	0	1	0	0
4370	61	Given: Distance 'A' to 'B' is 325 NM, Planned GS 315 kt, ATD 1130 UTC,	375 kt	395 kt	335 kt	355 kt	0	0	0	1
4371	61	Given: Distance 'A' to 'B' is 475 NM, Planned GS 315 kt, ATD 1000 UTC,	340 kt	360 kt.	300 kt	320 kt.	1	0	0	0
4372	61	Given: Magnetic track = 210°, Magnetic HDG = 215°, VAR = 15°E,	235°/50 kt	300°/30 kt	265°/50 kt	195°/50 kt	0	0	1	0
4373	61	Given: Magnetic track = 075°, HDG = 066°(M), VAR = 11°E,	180°/45 kt	340°/45 kt	320°/50 kt	210°/15 kt	0	1	0	0

4374	61	Given: Distance 'A' to 'B' 1973 NM Groundspeed 'out' 430 kt Groundspeed 'back' 385 kt	1664 NM	1698 NM	1422 NM	1490 NM	0	0	0	1
4375	61	An aircraft is planned to fly from position 'A' to position 'B',distance 320 NM, at an average GS of 180 kt. It departs 'A' at 1200 UTC. After flying 70 NM along track from 'A', the aircraft is 3 MIN ahead of planned time.	1347 UTC	1340 UTC	1333 UTC	1401 UTC	0	0	1	0
4376	61	Given: Distance 'A' to 'B' 2346 NM Groundspeed 'out' 365 kt Groundspeed 'back' 480 kt	167 MIN	219 MIN	290 MIN	197 MIN	0	1	0	0
4377	61	An island is observed to be 15° to the left. The aircraft heading is 120°(M), variation 17°(W).	268	302	088	122	0	0	1	0
4378	61	A ground feature was observed on a relative bearing of 315° and 3 MIN later on a relative bearing of 270°. The W/V is calm; aircraft GS 180 kt. What is the minimum distance between the aircraft and the ground feature?	12 NM	3 NM	6 NM	9 NM	0	0	0	1
4379	61	Given: Distance 'A' to 'B' 3623 NM Groundspeed 'out' 370 kt Groundspeed 'back' 300 kt	238 MIN	263 MIN	288 MIN	323 MIN	0	1	0	0
4380	61	Given: Distance 'Q' to 'R' 1760 NM Groundspeed 'out' 435 kt Groundspeed 'back' 385 kt	1467 NM	1642 NM	1838 NM	1313 NM	0	0	1	0
4381	61	Given: Distance 'Q' to 'R' 1760 NM Groundspeed 'out' 435 kt Groundspeed 'back' 385 kt	110 MIN	106 MIN	102 MIN	114 MIN	0	0	0	1
4382	61	An aircraft at latitude 02°20'N tracks 180°(T) for 685 km. On completion of the flight the latitude will be:	04°30'S	09°05'S	03°50'S	04°10'S	0	0	1	0
4383	61	An aircraft is planned to fly from position 'A' to position 'B', distance 250 NM at an average GS of 115 kt. It departs 'A' at 0900 UTC. After flying 75 NM along track from 'A', the aircraft is 1.5 MIN behind planned time. Using the actual GS experienced. what is the revised ETA at	1110 UTC	1044 UTC	1050 UTC	1115 UTC	0	0	0	1
4384	61	(For this question use annex 061-12554A) What is the radial and DME distance from SHA VOR/DME (N5243.3 W00853.1) to position N5310 W00830?	070° - 58 NM	207° - 31 NM	019° - 31 NM	035° - 30 NM	0	0	0	1
4385	61	(For this question use annex 061-12561A) What is the radial and DME distance from BEL VOR/DME (N5439.7 W00613.8) to position N5410 W00710?	320° - 44 NM	333° - 36 NM	236° - 44 NM	223° - 36 NM	0	0	1	0
4386	61	Fuel flow per HR is 22 US-GAL, total fuel on board is 83 IMP GAL.	2 HR 15 MIN	4 HR 32 MIN	3 HR 12 MIN	3 HR 53 MIN	0	1	0	0

4387	61	(For this question use annex 061-12559A) What is the radial and DME distance from CON VOR/DME (N5354.8 W00849.1) to position N5340 W00820?	311° - 22 NM	240° - 24 NM	140° - 23 NM	119° - 42 NM	0	0	1	0
4388	61	(For this question use annex 061-12558A) What is the radial and DME distance from CON VOR/DME (N5354.8 W00849.1) to position N5400 W00800?	320° - 8 NM	094° - 64 NM	260° - 30 NM	088° - 29 NM	0	0	0	1
4389	61	(For this question use annex 061-12557A) What is the radial and DME distance from CON VOR/DME (N5354.8 W00849.1) to position N5430 W00900?	214° - 26 NM	049° - 45 NM	169° - 35 NM	358° - 36 NM	0	0	0	1
4390	61	An aircraft at latitude 10°North flies south at a groundspeed of 445 km/HR.	03°50'S	02°00'S	12°15'S	22°00'S	0	1	0	0
4391	61	(For this question use annex 061-12555A) What is the radial and DME distance from SHA VOR/DME (N5243.3 W00853.1) to position N5220 W00810?	132° - 36 NM	212° - 26 NM	139° - 35 NM	129° - 46 NM	0	0	1	0
4392	61	(For this question use annex 061-12563A) What is the radial and DME distance from BEL VOR/DME (N5439.7 W00613.8) to position N5500 W00700?	296° - 65 NM	126° - 33 NM	222° - 48 NM	315° - 34 NM	0	0	0	1
4393	61	(For this question use annex 061-12553A) What is the radial and DME distance from SHA VOR/DME (N5243.3 W00853.1) to position N5300 W00940?	309° - 33 NM	057° - 27 NM	293° - 33 NM	324° - 17 NM	1	0	0	0
4394	61	(For this question use annex 061-12552A) What is the radial and DME distance from CRK VOR/DME (N5150.4 W00829.7) to position N5140 W00730?	293° - 39 NM	106° - 38 NM	113° - 38 NM	104° - 76 NM	0	0	1	0
4395	61	(For this question use annex 061-12551A) What is the radial and DME distance from CRK VOR/DME (N5150.4 W00829.7) to position N5230 W00750?	023° - 48 NM	017° - 43 NM	039° - 48 NM	024° - 43 NM	0	0	1	0
4396	61	(For this question use annex 061-12550A) What is the radial and DME distance from CRK VOR/DME (N5150.4 W00829.7) to position N5210 W00920?	350° - 22 NM	295° - 38 NM	170° - 22 NM	311° - 38 NM	0	0	0	1
4397	61	(For this question use annex 061-12549A) What is the radial and DME distance from CRK VOR/DME (N5150.4 W00829.7) to position N5220 W00810?	014° - 33 NM	220° - 40 NM	030° - 33 NM	048° - 40 NM	0	0	1	0
4398	61	(For this question use annex 061-9437A) Complete line 1 of the 'FLIGHT NAVIGATION LOG'; positions 'A' to 'B'.	268° - 1114 UTC	282° - 1128 UTC	282° - 1114 UTC	268° - 1128 UTC	1	0	0	0
4399	61	(For this question use annex 061-12556A) What is the radial and DME distance from SHA VOR/DME (N5243.3 W00853.1)	354° - 34 NM	198° - 37 NM	346° - 34 NM	214° - 37 NM	0	0	0	1
4400	61	On a Direct Mercator chart at latitude of 45°N, a certain length represents a distance of 90 NM on the earth. The same length on the chart will represent on the earth, at latitude 30°N, a distance of :	110 NM	73.5 NM	78 NM	45 NM	1	0	0	0
4401	61	The 'departure' between positions 60°N 160°E and 60°N 'x' is 900 NM.	170°W	140°W	145°E	175°E	1	0	0	0
4402	61	An aircraft at position 60°N 005°W tracks 090°(T) for 315 km. On completion of the flight the longitude will be:	002°10'W	000°15'E	000°40'E	005°15'E	0	0	1	0
4403	61	A flight is to be made from 'A' 49°S 180°E/W to 'B' 58°S, 180°E/W. The distance in kilometres from 'A' to 'B' is approximately:	540	804	1000	1222	0	0	1	0
4404	61	At what approximate date is the earth furthest from the sun (aphelion)?	End of December	Beginning of January	End of September	Beginning of July	0	0	0	1
4405	61	At what approximate date is the earth closest to the sun (perihelion)?	Beginning of January	End of March	Beginning of July	End of June	1	0	0	0

4406	61	Assuming mid-latitudes (40° to 50°N/S). At which time of year is the relationship between the length of day and night, as well as the rate of change of declination of the sun, changing at the greatest rate?	Spring equinox and autumn equinox	Summer solstice and spring equinox	summer solstice and winter solstice	Winter solstice and autumn equinox	1	0	0	0
4407	61	Two points A and B are 1000 NM apart. TAS = 490 kt. On the flight between A and B the equivalent headwind is -20 kt. On the return leg between B and A, the equivalent headwind is +40 kt. What distance from A. along the route A to B. is the the Point	470 NM	455 NM	500 NM	530 NM	0	0	0	1
4408	61	In which two months of the year is the difference between the transit of the Apparent Sun and Mean Sun across the Greenwich Meridian the greatest?	June and December	April and August	February and November	March and September	0	0	1	0
4409	61	(For this question use annex 061-12562A) What is the radial and DME distance from BEL VOR/DME (N5439.7 W00613.8) to position N5440 W00730?	098° - 45 NM	278° - 44 NM	090° - 46 NM	278° - 10 NM	0	1	0	0
4410	61	On a Direct Mercator chart at latitude 15°S, a certain length represents a distance of 120 NM on the earth. The same length on the chart will represent on the earth, at latitude 10°N, a distance of :	124.2 NM	118.2 NM	122.3 NM	117.7 NM	0	0	1	0
4411	61	(For this question use annex 061-12567A) What is the average track (°M) and distance between WTD NDB (N5211.3 W00705.0) and BAL VOR (N5318.0	206° - 71 NM	198° - 72 NM	026° - 71 NM	018° - 153 NM	0	0	1	0
4412	61	(For this question use annex 061-12566A) What is the average track (°M) and distance between CRN NDB (N5318.1 W00856.5) and WTD NDB (N5211.3	135° - 96 NM	322° - 95 NM	142° - 95 NM	315° - 94 NM	0	0	1	0
4413	61	(For this question use annex 061-12565A) What is the average track (°M) and distance between CRK VOR (N5150.4 W00829.7) and CRN NDB (N5318.1	177° - 92 NM	357° - 89 NM	169° - 91 NM	349° - 90 NM	0	1	0	0
4414	61	(For this question use annex 061-12564A) What is the average track (°M) and distance between WTD NDB (N5211.3 W00705.0) and KER NDB (N5210.9	090° - 91 NM	270° - 89 NM	098° - 90 NM	278° - 90 NM	0	0	0	1
4415	61	Given: Direct Mercator chart with a scale of 1 : 200 000 at equator; Chart length from 'A' to 'B', in the vicinity of the equator, 11 cm.	12 NM	21 NM	22 NM	14 NM	1	0	0	0
4416	61	What is the highest latitude listed below at which the sun will reach an altitude of 90° above the horizon at some time during the year?	0°	23°	45°	66°	0	1	0	0
4417	61	What is the meaning of the term "standard time" ?	It is the time zone system applicable only in the USA	It is an expression for local mean time	It is another term for UTC	It is the time set by the legal authorities for a country or part of a country	0	0	0	1
4418	61	Given: The coordinates of the heliport at Issy les Moulineaux are: N48°50' E002°16.5'	S41°10' W177°43.5'	S41°10' E177°43.5'	S48°50' W177°43.5'	S48°50' E177°43.5'	0	0	1	0
4419	61	How many NM would an aircraft travel in 1 MIN 45 SEC if GS is 135 kt?	2.36	3.25	39.0	3.94	0	0	0	1
4420	61	Given: Course 040°(T), TAS is 120 kt, Wind speed 30 kt.	120°	130°	145°	115°	0	1	0	0

4421	61	Given: IAS 120 kt, FL 80,	120 kt	132 kt	141 kt	102 kt	0	0	1	0
4422	61	Given: Compass Heading 090°, Deviation 2°W, Variation 12°E, TAS 160 kt. Whilst maintaining a radial 070° from a VOR station,	340°/25 kt	340°/98 kt	155°/25 kt	160°/50 kt	0	0	0	1
4423	61	Given: Pressure Altitude 29000 FT, OAT -55°C	27500 FT	31000 FT	33500 FT	26000 FT	1	0	0	0
4424	61	Given: M 0.80, OAT -50°C, FL 330, GS 490 kt, [illegible]	025°/45 kt	020°/95 kt	025°/47 kt	200°/95 kt	0	1	0	0
4425	61	Given: TAS 487kt, FL 330,	0.76	0.78	0.81	0.84	0	0	1	0
4426	61	What is the ISA temperature value at FL 330?	-56° C	-66° C	-81° C	-50° C	0	0	0	1
4427	61	When an aircraft on a westerly heading on the northern hemisphere accelerates, the effect of the acceleration error causes the magnetic compass to:	lag behind the turning rate of the aircraft	indicate a turn towards the south	to turn faster than the actual turning rate of the aircraft	indicate a turn towards the north	0	0	0	1
4428	61	When is the magnetic compass most effective?	In the region of the magnetic North Pole.	On the geographic equator	About midway betw een the magnetic poles	In the region of the magnetic South Pole.	0	0	1	0
4429	61	Given: TAS = 472 kt, True HDG = 005°,	7° R - 487 kt	6° L - 487 kt	7° R - 491 kt	7° L - 491 kt	0	1	0	0
4430	61	What is the local mean time, position 65°25'N 123°45'W at 2200 UTC?	2200	0615	0815	1345	0	0	0	1
4431	61	An aircraft flies the following rhumb line tracks and distances from position 04° 00'N 030° 00'W : 600 NM South, then 600 NM East, then 600 NM North,	04°00'N 030°00'W	03°58'N 030°02'W	04°00'N 029°58'W	04°00'N 030°02'W	0	0	1	0
4432	61	Isogrives are lines that connect positions that have:	the same variation	O° magnetic dip	the same grivation	the same horizontal magnetic field strength	0	0	1	0
4433	61	An aircraft flies a great circle track from 56° N 070° W to 62° N 110° E.	1788 NM	2040 NM	3720 NM	5420 NM	0	0	1	0
4434	61	An aircraft travels 2.4 statute miles in 47 seconds. What is its groundspeed?	209 kt	131 kt	160 kt	183 kt	0	0	1	0
4435	61	How long will it take to fly 5 NM at a groundspeed of 269 Kt ?	0 MIN 34 SEC	1 MIN 07 SEC	1 MIN 55 SEC	2 MIN 30 SEC	0	1	0	0

4436	61	730 FT/MIN equals:	5.2 m/sec	1.6 m/sec	2.2 m/sec	3.7 m/sec	0	0	0	1
4437	61	265 US-GAL equals? (Specific gravity 0.80)	862 kg	895 kg	940 kg	803 kg	0	0	0	1
4438	61	Given: TAS = 140 kt, True HDG = 302°,	9°R - 143 kt	9°L - 146 kt	18°R - 146 kt	16°L - 156 kt	0	0	0	1
4439	61	Given: TAS = 290 kt, True HDG = 171°,	4°L - 314 kt	4°R - 310 kt	4°R - 314 kt	4°L - 310 kt	1	0	0	0
4440	61	Given: GS = 135 kt. Distance from A to B = 433 NM.	3 HR 20 MIN	3 HR 12 MIN	3 HR 25 MIN	3 HR 19 MIN	0	1	0	0
4441	61	The angular difference, on a Lambert conformal conic chart, between the arrival and departure track is equal to:	difference in longitude	map convergence	earth convergence	conversion angle	0	1	0	0
4442	61	Given: True course A to B = 250° Distance A to B = 315 NM TAS = 450 kt.	0810 UTC	0716 UTC	0736 UTC	0730 UTC	0	0	1	0
4443	61	An Agonic line is a line that connects:	positions that have 0° variation	positions that have the same variation	points of equal magnetic dip	points of equal magnetic horizontal field strength	1	0	0	0
4444	61	Parallels of latitude, except the equator, are:	Rhumb lines	Great circles	both Rhumb lines and Great circles	are neither Rhumb lines nor Great circles	1	0	0	0
4445	61	Given: GS = 510 kt. Distance A to B = 43 NM	6	7	5	4	0	0	1	0
4446	61	Given: true track 070° variation 30°W deviation +1°	089°	091°	100°	101°	1	0	0	0
4447	61	The angle between True North and Magnetic North is called :	drift	variation	deviation	compass error	0	1	0	0
4448	61	Given: GS = 122 kt. Distance from A to B = 985 NM.	8 HR 10 MIN	8 HR 04 MIN	7 HR 48 MIN	7 HR 49 MIN	0	1	0	0
4449	61	What is the value of the magnetic dip at the magnetic south pole ?	0°	90°	45°	60°	0	1	0	0
4450	61	Given: GS = 236 kt. Distance from A to B = 354 NM	1 HR 40 MIN	1 HR 30 MIN	1 HR 09 MIN	1 HR 10 MIN	0	1	0	0
4451	61	Given: GS = 435 kt. Distance from A to B = 1920 NM.	4 HR 10 MIN	4 HR 25 MIN	3 HR 25 MIN	3 HR 26 MIN	0	1	0	0
4452	61	Given: GS = 345 kt. Distance from A to B = 3560 NM.	11 HR 00 MIN	11 HR 02 MIN	10 HR 19 MIN	10 HR 05 MIN	0	0	1	0
4453	61	Given: GS = 480 kt. Distance from A to B = 5360 NM.	11 HR 07 MIN	11 HR 15 MIN	11 HR 10 MIN	11 HR 06 MIN	0	0	1	0
4454	61	Given: GS = 95 kt. Distance from A to B = 480 NM.	5 HR 03 MIN	4 HR 59 MIN	5 HR 00 MIN	5 HR 08 MIN	1	0	0	0
4455	61	Given: GS = 105 kt. Distance from A to B = 103 NM.	00 HR 58 MIN	01 HR 01 MIN	00 HR 59 MIN	00 HR 57 MIN	0	0	1	0

4456	61	Given: TAS = 470 kt, True HDG = 317°	3° R - 470 kt	5° L - 475 kt	5° R - 475 kt	5° L - 470 kt	0	0	0	1
4457	61	At a specific location, the value of magnetic variation:	depends on the type of compass installed	depends on the magnetic heading	depends on the true heading	varies slowly over time	0	0	0	1
4458	61	Given: TAS = 270 kt, True HDG = 270°,	6L - 256kt	6R - 251kt	8R - 259kt	6R - 259kt	0	0	0	1
4459	61	Given: FL120, OAT is ISA standard, CAS is 200 kt, Track is 222°(M),	065°(T) / 70 kt.	050°(T) / 70 kt.	040°(T) / 105 kt.	055°(T) / 105 kt .	0	1	0	0
4460	61	At latitude 60°N the scale of a Mercator projection is 1 : 5 000 000. The length on the chart between 'C' N60° E008° and 'D' N60° W008° is:	16.2 cm	35.6 cm	19.2 cm	17.8 cm	0	0	0	1
4461	61	Given : A is N55° 000° B is N54° E010° The average true course of the great circle is 100°.	096°	104°	107°	100°	0	0	0	1
4462	61	Given: Distance A to B is 360 NM. Wind component A - B is -15 kt, Wind component B - A is +15 kt,	180 NM	170 NM	165 NM	195 NM	0	0	1	0
4463	61	Given: Half way between two reporting points the navigation log gives the following information: TAS 360 kt, W/V 330°/80kt, Compass heading 237°,	373 kt	360 kt	403 kt	354 kt	0	0	1	0
4464	61	(For this question use appendix) Given: TAS is120 kt. ATA 'X' 1232 UTC,	1302 UTC	1257 UTC	1300 UTC	1303 UTC	1	0	0	0
4465	61	A negative (westerly) magnetic variation signifies that :	Compass North is East of Magnetic North	Compass North is West of Magnetic North	True North is East of Magnetic North	True North is West of Magnetic North	0	0	1	0
4466	61	In northern hemisphere, during an acceleration in an easterly direction, the magnetic compass will indicate:	a heading of East	a decrease in heading	an increase in heading	an apparent turn to the South	0	1	0	0
4467	61	Deviation applied to magnetic heading gives:	magnetic track	compass heading	true heading	magnetic course	0	1	0	0
4468	61	The purpose of compass check swing is to:	cancel out the horizontal component of the earth's magnetic field	cancel out the effects of the magnetic fields found on board the aeroplane	measure the angle between Magnetic North and Compass North	cancel out the vertical component of the earth's magnetic field	0	0	1	0

4469	61	At what approximate latitude is the length of one minute of arc along a meridian equal to one NM (1852 m) correct?	30°	45°	0°	90°	0	1	0	0
4470	61	Isogonals are lines of equal :	wind velocity.	magnetic variation.	compass deviation.	pressure.	0	1	0	0
4471	61	Given: GS = 120 kt. Distance from A to B = 84 NM.	00 HR 43 MIN	00 HR 44 MIN	00 HR 45 MIN	00 HR 42 MIN	0	0	0	1
4472	61	The distance between positions A and B is 180 NM. An aircraft departs position A and after having travelled 60 NM, its position is pinpointed 4 NM left of the intended track. Assuming no change in wind velocity, what alteration of heading must be made in order to arrive at position B?	8° Right	2° Left	4° Right	6° Right	0	0	0	1
4473	61	An aircraft at FL290 is required to commence descent when 50 NM from a VOR and to cross that VOR at FL80. Mean GS during descent is 271kt. What is the minimum rate of descent required?	1800 FT/MIN	1900 FT/MIN	2000 FT/MIN	1700 FT/MIN	0	1	0	0
4474	61	Given: Magnetic track = 315 °, HDG = 301 °(M), VAR = 5 °W,	190 °/63 kt	355 °/15 kt	195 °/61 kt	195 °/63 kt	1	0	0	0
4475	61	Assuming zero wind, what distance will be covered by an aircraft descending 15000 FT with a TAS of 320 kt and maintaining a rate of descent of 3000 FT/MIN?	16.0 NM	26.7 NM	19.2 NM	38.4 NM	0	1	0	0
4476	61	A Lambert conformal conic chart has a constant of the cone of 0.80. A straight line course drawn on this chart from A (53°N 004°W) to B is 080° at A; course at B is 092°(T). What is the longitude of B?	011°E	009°36'E	008°E	019°E	1	0	0	0
4477	61	Given: Runway direction 305°(M), Surface WV 260°(M)/30 kt	21 kt	24 kt	27 kt	18 kt	1	0	0	0
4478	61	An aircraft at FL350 is required to commence descent when 85 NM from a VOR and to cross the VOR at FL80. The mean GS for the descent is 340 kt. What is the minimum rate of descent required?	1800 FT/MIN	1900 FT/MIN	1600 FT/MIN	1700 FT/MIN	1	0	0	0
4479	61	An island is observed by weather radar to be 15° to the left. The aircraft heading is 120°(M) and the magnetic variation 17°W. What is the true bearing of the aircraft from the island?	088°	122°	268°	302°	0	0	1	0
4480	61	During a low level flight 2 parallel roads that are crossed at right angles by an aircraft. The time between these roads can be used to check the aircraft:	drift	groundspeed	position	track	0	1	0	0
4481	61	Given: FL250, OAT -15 °C,	0.44	0.39	0.40	0.42	0	0	1	0
4482	61	Given: TAS = 220 kt; Magnetic course = 212 °,	290 kt	246 kt	250 kt	186 kt	0	0	0	1
4483	61	An aircraft travels 100 statute miles in 20 MIN, how long does it take to travel 215 NM?	90 MIN	80 MIN	50 MIN	100 MIN	0	0	1	0
4484	61	Given: TAS = 485 kt, True HDG = 226°,	9°R - 533 kt	7°R - 531 kt	9°R - 433 kt	8°L - 435 kt	1	0	0	0

4485	61	Which of the following statements concerning earth magnetism is completely correct?	An isogonal is a line which connects places of equal dip; the aclinic is the line of zero magnetic dip	An isogonal is a line which connects places with the same magnetic variation; the aclinic connects places with the same magnetic field strength	An isogonal is a line which connects places with the same magnetic variation; the aclinic is the line of zero magnetic dip	An isogonal is a line which connects places with the same magnetic variation; the agonic line is the line of zero magnetic dip	0	0	1	0
4486	61	Given: Chart scale is 1 : 1 850 000. The chart distance between two points is 4 centimetres.	40 NM	74 NM	100 NM	4 NM	1	0	0	0
4487	61	The Earth can be considered as being a magnet with the:	red pole near the north pole of the earth and the direction of the magnetic force pointing straight down to the earth's surface	blue pole near the north pole of the earth and the direction of the magnetic force pointing straight up from the earth's surface	red pole near the north pole of the earth and the direction of the magnetic force pointing straight up from the earth's surface	blue pole near the north pole of the earth and the direction of the magnetic force pointing straight down to the earth's surface	0	0	0	1
4488	61	Complete the following statement regarding magnetic variation. The charted values of magnetic variation on earth normally change annually due to:	magnetic pole movement causing numerical values at all locations to increase or decrease	magnetic pole movement causing numerical values at all locations to increase.	a reducing field strength causing numerical values at all locations to decrease.	an increasing field strength causing numerical values at all locations to increase.	1	0	0	0
4489	61	Which one of the following is an advantage of a remote reading compass as compared with a standby compass?	It eliminates the effect of turning and acceleration errors by pendulously suspending the detector unit	It is more reliable because it is operated electrically and power is always available from sources within the aircraft	It senses the magnetic meridian instead of seeking it, increasing compass sensitivity	It is lighter than a direct reading compass because it employs, apart from the detector unit, existing aircraft equipment	0	0	1	0
4490	61	Which of the following statements is correct concerning the effect of turning errors on a direct reading compass?	Turning errors are greatest on east/west headings, and are greatest at high latitudes	Turning errors are greatest on north/south headings, and are greatest at high latitudes	Turning errors are greatest on east/west headings, and are least at high latitudes	Turning errors are greatest on north/south headings, and are least at high latitudes	0	1	0	0

4491	61	Which of the following is an occasion for carrying out a compass swing on a Direct Reading Compass?	Before an aircraft goes on any flight that involves a large change of magnetic latitude	After any of the aircraft radio equipment has been changed due to unserviceability	Whenever an aircraft carries a large freight load regardless of its content	After an aircraft has passed through a severe electrical storm, or has been struck by lightning	0	0	0	1
4492	61	The parallels on a Lambert Conformal Conic chart are represented by:	straight lines	parabolic lines	hyperbolic lines	arcs of concentric circles	0	0	0	1
4493	61	The main reason that day and night, throughout the year, have different duration, is due to the:	inclination of the ecliptic to the equator	earth's rotation	relative speed of the sun along the ecliptic	gravitational effect of the sun and moon on the speed of rotation of the earth	1	0	0	0
4494	61	An aircraft departing A(N40 °00´ E080 °00´) flies a constant true track of 270 °at a ground speed of 120 kt. What are the coordinates of the position reached in 6 HR?	N40 °00´ E068 °10´	N40 °00´ E064 °20´	N40 °00´ E070 °30´	N40 °00´ E060 °00´	0	1	0	0
4495	61	The lines on the earth's surface that join points of equal magnetic variation are called:	isogrives	isoclines	isogonals	isotachs	0	0	1	0
4496	61	An island appears 30° to the left of the centre line on an airborne weather radar display. What is the true bearing of the aircraft from the island if at the time of observation the aircraft was on a magnetic heading of 276° with the magnetic variation 12°W?	234°	038°	054°	318°	0	0	1	0
4497	61	At the magnetic equator, when accelerating after take off on heading West, a direct reading compass :	underreads the heading	indicates a turn to the south	indicates the correct heading	overreads the heading	0	0	1	0
4498	61	The ICAO definition of ETA is the:	actual time of arrival at a point or fix	estimated time of arrival at an en-route point or fix	estimated time en route	estimated time of arrival at destination	0	0	0	1
4499	61	An aircraft at FL350 is required to descend to cross a DME facility at FL80. Maximum rate of descent is 1800 FT/MIN and mean GS for descent is 276 kt. The minimum range from the DME at which descent should	69 NM	79 NM	49 NM	59 NM	1	0	0	0
4500	61	Given: TAS = 190 kt, True HDG = 085°,	4°L - 145 kt	8°L - 146 kt	7°L - 156 kt	4°L - 168 kt	0	1	0	0
4501	61	The term drift refers to the wander of the axis of a gyro in:	the vertical and horizontal plane	any plane	the horizontal plane	the vertical plane	0	0	1	0
4502	61	An aircraft at FL370 is required to commence descent when 100 NM from a DME facility and to cross the station at FL120. If the mean GS during the descent is 396 kt, the minimum rate of descent required is approximately:	1650 FT/MIN	2400 FT/MIN	1000 FT/MIN	1550 FT/MIN	1	0	0	0
4503	61	An aircraft at FL140, IAS 210 kt, OAT -5°C and wind component minus 35 kt, is required to reduce speed in order to cross a reporting point 5 MIN later than planned. Assuming that flight conditions do not change, when 150 NM from the reporting point the IAS should be reduced by:	15 kt	20 kt	25 kt	30 kt	0	1	0	0
4504	61	An aircraft at FL370 is required to commence descent at 120 NM from a VOR and to cross the facility at FL130. If the mean GS for the descent is 288 kt, the minimum rate of descent required is:	860 FT/MIN	890 FT/MIN	920 FT/MIN	960 FT/MIN	0	0	0	1

4505	61	An aircraft at FL310, M0.83, temperature -30°C, is required to reduce speed in order to cross a reporting point five minutes later than planned. Assuming that a zero wind component remains unchanged, when 360 NM from the reporting point Mach Number should	M0.74	M0.76	M0.78	M0.80	1	0	0	0
4506	61	A Lambert conformal conic chart has a constant of the cone of 0.75. The initial course of a straight line track drawn on this chart from A (40°N 050°W) to B is 043°(T) at A; course at B is 055°(T).	34°W	36°W	38°W	41°W	1	0	0	0
4507	61	Given: Runway direction 210°(M), Surface WV 230°(M)/30kt	19 kt	16 kt	13 kt	10 kt	0	0	0	1
4508	61	At 0422 an aircraft at FL370, GS 320kt, is on the direct track to VOR 'X' 185 NM distant. The aircraft is required to cross VOR 'X' at FL80. For a mean rate of descent of 1800 FT/MIN at a mean GS of 232 kt,	0451	0454	0445	0448	0	0	1	0
4509	61	An aircraft at FL330 is rerquired to commence descent when 65 NM from a VOR and to cross the VOR at FL100. The mean GS during the descent is 330 kt. What is the minimum rate of descent required?	1850 FT/MIN	1950 FT/MIN	1650 FT/MIN	1750 FT/MIN	0	1	0	0
4510	61	An aircraft obtains a relative bearing of 315° from an NDB at 0830. At 0840 the relative bearing from the same position is 270°. Assuming no drift and a GS of 240 kt, what is the	60 NM	30 NM	40 NM	50 NM	0	0	1	0
4511	61	The equivalent of 70 m/sec is approximately:	136 kt	145 kt	210 kt	35 kt	1	0	0	0
4512	61	A ground feature was observed on a relative bearing of 325° and five minutes later on a relative bearing of 280°. The aircraft heading was 165°(M), variation 25°W, drift 10°Right and GS 360 kt. When the relative bearing was 280°, the distance and true bearing of the aircraft from the feature was:	30 NM and 060°	30 NM and 240°	40 NM and 110°	40 NM and 290°	0	1	0	0
4513	61	On a chart, the distance along a meridian between latitudes 45°N and 46°N is 6 cm. The scale of the chart is approximately:	1 : 185 000	1 : 18 500 000	1 : 1 850 000	1 : 1 000 000	0	0	1	0
4514	61	An aircraft at FL120, IAS 200kt, OAT -5° and wind component +30kt, is required to reduce speed in order to cross a reporting point 5 MIN later than planned. Assuming flight conditions do not change, when 100 NM from the reporting point IAS should be reduced to:	174 kt	159 kt	165 kt	169 kt	0	1	0	0
4515	61	Given: Runway direction 083°(M), Surface WV 035/25kt	27 kt	31 kt	34 kt	24 kt	0	0	0	1
4516	61	Approximately how many nautical miles correspond to 12 cm on a map with a scale of 1 : 2 000 000?	130	150	329	43	1	0	0	0
4517	61	An aircraft at FL350 is required to cross a VOR/DME facility at FL110 and to commence descent when 100 NM from the facility. If the mean GS for the descent is 335 kt, the minimum rate of	1340 FT/MIN	1390 FT/MIN	1240 FT/MIN	1290 FT/MIN	1	0	0	0
4518	61	An aircraft at FL370, M0.86, OAT -44°C, headwind component 110 kt, is required to reduce speed in order to cross a reporting point 5 MIN later than planned. If the speed reduction were to be made 420 NM from the reporting point, what Mach Number is required?	M0.73	M0.75	M0.79	M0.81	0	0	0	1

4519	61	Given: For take-off an aircraft requires a headwind component of at least 10 kt and has a cross-wind limitation of 35 kt. The angle between the wind direction and the runway is 60°, Calculate the minimum and maximum allowable wind speeds?	18 kt and 50 kt	20 kt and 40 kt	12 kt and 38 kt	15 kt and 43 kt	0	1	0	0
4520	61	An aircraft at FL390 is required to descend to cross a DME facility at FL70. Maximum rate of descent is 2500 FT/MIN, mean GS during descent is 248 kt. What is the minimum range from the DME at which descent should commence?	68 NM	53 NM	58 NM	63 NM	0	1	0	0
4521	61	Given: An aircraft is on final approach to runway 32R (322°); The wind velocity reported by the tower is 350°/20 kt.; TAS on approach is 95 kt. In order to maintain the centre line, the aircraft's heading	328°	322°	316°	326°	1	0	0	0
4522	61	(For this question use annex 061-1829A and the data for 1300 UTC) 1300 UTC DR position 37°30'N 021°30'W alter heading PORT SANTO NDB (33°03'N 016°23'W) TAS 450 kt,	1344	1341	1354	1348	0	0	0	1
4523	61	What is the ratio between the litre and the US-GAL ?	1 US-GAL equals 4.55 litres	1 litre equals 4.55 US-GAL	1 US-GAL equals 3.78 litres	1 litre equals 3.78 US-GAL	0	0	1	0
4524	61	The sensitivity of a direct reading compass varies:	inversely with the vertical component of the earth's magnetic field	directly with the horizontal co mponent of the earth's magnetic field	directly with the vertical component of the earth's magnetic field	inversely with both vertical and horizontal components of the earth's magnetic field	0	1	0	0
4525	61	What is the final position after the following rhumb line tracks and distances have been followed from position 60°00'N 030°00'W? South for 3600 NM, East for 3600 NM, North for 3600 NM,	59°00'N 090°00'W	60°00'N 090°00'W	60°00'N 030°00'E	59°00'N 060°00'W	0	1	0	0
4526	61	In an Inertial Navigation System (INS), Ground Speed (GS) is calculated:	from TAS and W/V from Air Data Comput er (ADC)	from TAS and W/V from RNAV data	by integrating gyro precession in N/S and E/W directions respectively	by integrating measured acceleration	0	0	0	1
4527	61	Given: TAS = 375 kt, True HDG = 124°,	126 - 320 kt	125 - 318 kt	123 - 320 kt	125 - 322 kt	0	0	1	0
4528	61	Given: true track 352° variation 11° W deviation is -5°	018°	025°	358°	346°	0	0	1	0

4529	61	Given : True altitude 9000 FT, OAT -32°C,	215 kt	200 kt	210 kt	220 kt	0	0	0	1
4530	61	Given: An aircraft is flying a track of 255°(M), 2254 UTC, it crosses radial 360° from a VOR station, 2300 UTC, it crosses radial 330° from the same station. At 2300 UTC, the distance between the aircraft and the	less than it was at 2254 UTC	the same as it was at 2254 UTC	greater than it was at 2254 UTC	randomly different than it was at 2254 UTC	0	1	0	0
4531	61	The distance between two waypoints is 200 NM, To calculate compass heading, the pilot used 2°E magnetic variation instead of 2°W. Assuming that the forecast W/V applied, what will the off track distance be at the second waypoint?	14 NM	7 NM	0 NM	21 NM	1	0	0	0
4532	61	The scale on a Lambert conformal conic chart :	is constant along a meridian of longitude	is constant across the whole map	varies slightly as a function of latitude and longitude	is constant along a parallel of latitude	0	0	0	1
4533	61	5 HR 20 MIN 20 SEC corresponds to a longitude difference of:	75°00'	78°45'	80°05'	81°10'	0	0	1	0
4534	61	The Local Mean Time at longitude 095°20'W, at 0000 UTC, is :	1738:40 same day	0621:20 same day	1738:40 previous day	0621:20 previous day	0	0	1	0
4535	61	Isogonic lines connect positions that have:	the same angle of magnetic dip	the same variation	0° variation	the same elevation	0	1	0	0
4536	61	The circumference of the earth is approximately:	10800 NM	21600 NM	43200 NM	5400 NM	0	1	0	0
4537	61	Seasons are due to the:	Earth's rotation on its polar axis	variable distance between Earth and Sun	inclination of the polar axis with the ecliptic plane	Earth's elliptical orbit around the Sun	0	0	1	0
4538	61	Given: TAS = 370 kt, True HDG = 181°,	189 - 370 kt	186 - 370 kt	176 - 370 kt	192 - 370 kt	0	1	0	0
4539	61	Civil twilight is defined by :	sun altitude is 12° below the celestial horizon	sun altitude is 18° below the celestial horizon	sun upper edge tangential to horizon	sun altitude is 6° below the celestial horizon	0	0	0	1
4540	61	Given: TAS = 125 kt, True HDG = 355°,	002 - 98 kt	005 - 102 kt	345 - 100 kt	348 - 102 kt	0	1	0	0
4541	61	Given: TAS = 135 kt, HDG (°T) = 278,	283 - 150 kt	279 - 152 kt	282 - 148 kt	275 - 150 kt	1	0	0	0
4542	61	Given: TAS = 480 kt, HDG (°T) = 040°,	032 - 425 kt	036 - 435 kt	034 - 445 kt	028 - 415 kt	0	0	1	0
4543	61	Given: TAS = 155 kt, HDG (T) = 216°,	226 - 186 kt	231 - 196 kt	224 - 175 kt	222 - 181 kt	0	1	0	0
4544	61	Given: TAS = 170 kt, HDG(T) = 100°,	098 - 178 kt	109 - 182 kt	091 - 183 kt	103 - 178 kt	0	1	0	0

4545	61	Given: TAS = 235 kt, HDG (T) = 076°	5R - 207 kt	7R - 204 kt	7L - 269 kt	5L - 255 kt	0	1	0	0
4546	61	Given: TAS = 440 kt, HDG (T) = 349°	5L - 385 kt	4L - 415 kt	2L - 420 kt	6L - 395 kt	0	1	0	0
4547	61	Given: True course 300° drift 8°R variation 10°W	294°	278°	306°	322°	0	0	1	0
4548	61	Given: TAS = 465 kt, HDG (T) = 124°,	4L - 400 kt	6L - 400 kt	8L - 415 kt	3L - 415 kt	0	0	1	0
4549	61	Given: TAS = 132 kt, True HDG = 257°	3°L - 166 kt	4°R - 165 kt	2°R - 166 kt	4°L - 167 kt	0	1	0	0
4550	61	Given: True track 180° Drift 8°R Compass heading 195°	9°W	21°W	25°W	5°W	0	1	0	0
4551	61	On a Mercator chart, at latitude 60°N, the distance measured between W002° and E008° is 20 cm. The scale of this chart at latitude 60°N is approximately:	1 : 2 780 000	1 : 278 000	1 : 5 560 000	1 : 556 000	1	0	0	0
4552	61	An aircraft takes-off from an airport 2 hours before sunset. The pilot flies a track of 090°(T), W/V 130°/ 20 kt, TAS 100 kt. In order to return to the point of departure before sunset, the furthest distance which may be travelled is:	115 NM	105 NM	84 NM	97 NM	0	0	0	1
4553	61	Assume a Mercator chart. The distance between positions A and B, located on the same parallel and 10° longitude apart, is 6 cm. The scale at the parallel is 1 : 9 260 000.	60° N or S	30° N or S	0°	45° N or S	1	0	0	0
4554	61	On a Lambert chart (standard parallels 37°N and 65°N), with respect to the straight line drawn on the map between A (N49° W030°) and B (N48° W040°), the:	great circle and rhumb line are to the south	great circle and rhumb line are to the north	great circle is to the north, the rhumb line is to the south	rhumb line is to the north, the great circle is to the south	1	0	0	0
4555	61	A direct Mercator graticule is based on a projection that is :	spherical	concentric	cylindrical	conical	0	0	1	0
4556	61	Given: Aircraft at FL 150 overhead an airport Elevation of airport 720 FT. QNH is 1003 hPa.	14 720 FT	15 280 FT	15 840 FT	14 160 FT	0	1	0	0
4557	61	An aircraft takes off from the aerodrome of BRIOUDE (altitude 1 483 FT, QFE = 963 hPa, temperature = 32°C). Five minutes later, passing 5 000 FT on QFE, the second altimeter set on 1 013 hPa will indicate approximately :	6 400 FT	6 800 FT	6 000 FT	4 000 FT	1	0	0	0
4558	61	Given : ETA to cross a meridian is 2100 UTC GS is 441 kt TAS is 491 kt	75 kt	60 kt	40 kt	90 kt	0	0	1	0

4559	61	The flight log gives the following data : "True track, Drift, True heading, Magnetic variation, Magnetic heading, Compass deviation, Compass heading" The right solution, in the same order, is :	117°, 4°L, 121°, 1°E, 122°, -3°, 119°	125°, 2°R, 123°, 2°W, 121°, -4°, 117°	119°, 3°L, 122°, 2°E, 120°, +4°, 116°	115°, 5°R, 120°, 3°W, 123°, +2°, 121°	0	0	1	0
4560	61	Given : Position 'A' N60 W020, Position 'B' N60 W021, Position 'C' N59 W020.	52 NM and 60 NM	60 NM and 30 NM	60 NM and 52 NM	30 NM and 60 NM	0	0	0	1
4561	61	Concerning direct reading magnetic compasses, in the northern hemisphere, it can be said that :	on an Easterly heading, a longitudinal acceleration causes an apparent turn to the South	on a Westerly hea ding, a longitudinal acceleration causes an apparent turn to the South	on a Westerly hea ding, a longitudinal deceleration causes an apparent turn to the North	on an Easterly heading, a longitudinal acceleration causes an apparent turn to the North	0	0	0	1
4562	61	Given: TAS = 225 kt, HDG (°T) = 123°,	134 - 178 kt	134 - 188 kt	120 - 190 kt	128 - 180 kt	1	0	0	0
4563	61	Compass deviation is defined as the angle between:	True North and Compass North	the horizontal and the total intensity of the earth's magnetic field	Magnetic North and Compass North	True North and Magnetic Nor th	0	0	1	0
4564	61	At 0020 UTC an aircraft is crossing the 310° radial at 40 NM of a VOR/DME station. At 0035 UTC the radial is 040° and DME distance is 40 NM. Magnetic variation is zero.	080° - 226 kt	088° - 232 kt	085° - 226 kt	090° - 232 kt	0	0	1	0
4565	61	A straight line on a chart 4.89 cm long represents 185 NM. The scale of this chart is approximately :	1 : 5 000 000	1 : 7 000 000	1 : 3 500 000	1 : 6 000 000	0	1	0	0
4566	61	From the departure point, the distance to the point of equal time is :	inversely proportional to ground speed back	inversely proportional to the sum of ground speed out and ground speed back	proportional to the sum of ground speed out and ground speed back	inversely proportional to the total distance to go	0	1	0	0
4567	61	Given: Required course 045°(M); Variation is 15°E; W/V is 190°(T)/30 kt;	036° and 151 kt	052° and 154 kt	056° and 137 kt	055° and 147 kt	0	0	0	1
4568	61	Given: TAS = 270 kt, True HDG = 145°,	6°R - 259 kt	6°L - 256 kt	6°R - 251 kt	8°R - 261 kt	0	1	0	0
4569	61	Given: Airport elevation is 1000 ft. QNH is 988 hPa. What is the approximate airport pressure altitude?	1680 FT	320 FT	680 FT	- 320 FT	1	0	0	0
4570	61	Given: Maximum allowable crosswind component is 20 kt. Runway 06, RWY QDM 063°(M). Wind direction 100°(M)	25 kt	33 kt	31 kt	26 kt	0	1	0	0

4571	61	The circumference of the parallel of latitude at 60°N is approximately:	18 706 NM	20 000 NM	34 641 NM	10 800 NM	0	0	0	1
4572	61	Given: Runway direction 230°(T), Surface WV 280°(T)/40 kt	31 kt	36 kt	21 kt	26 kt	1	0	0	0
4573	61	Given: True HDG = 206°, TAS = 140 kt, Track (T) = 207°,	180/10kt	180/05kt	000/05kt	000/10kt	0	1	0	0
4574	61	Given: TAS = 95 kt, HDG (T) = 075°,	8R - 104 kt	9R - 108 kt	10L - 104 kt	9L - 105 kt	0	1	0	0
4575	61	Given: TAS = 227 kt, Track (T) = 316°,	312 - 232 kt	311 - 230 kt	313 - 235 kt	310 - 233 kt	1	0	0	0
4576	61	Given: TAS = 198 kt, HDG (°T) = 180,	179 - 220 kt	181 - 180 kt	180 - 183 kt	180 - 223 kt	0	0	0	1
4577	61	Given: TAS = 200 kt, Track (T) = 073°,	075 - 213 kt	077 - 210 kt	077 - 214 kt	079 - 211 kt	0	0	1	0
4578	61	Given: TAS = 200 kt, Track (T) = 110°,	097 - 201 kt	099 - 199 kt	121 - 207 kt	121 - 199 kt	0	1	0	0
4579	61	Given: TAS = 270 kt, Track (T) = 260°,	262 - 237 kt	264 - 241 kt	264 - 237 kt	262 - 241 kt	0	0	0	1
4580	61	Given: True HDG = 307°, TAS = 230 kt, Track (T) = 313°,	265/30kt	260/30kt	257/35kt	255/25kt	0	1	0	0
4581	61	Given: True HDG = 233°, TAS = 480 kt, Track (T) = 240°,	105/75kt	110/75kt	115/70kt	110/80kt	0	1	0	0
4582	61	Given: TAS = 155 kt, Track (T) = 305°,	305 - 169 kt	309 - 170 kt	309 - 141 kt	301 - 169 kt	0	0	0	1
4583	61	Given: True HDG = 074°, TAS = 230 kt, Track (T) = 066°,	180/40kt	180/35kt	180/30kt	185/35kt	0	1	0	0
4584	61	Given: TAS = 130 kt, Track (T) = 003°,	002 - 173 kt	359 - 166 kt	357 - 168 kt	001 - 170 kt	0	0	0	1

4585	61	Given: True HDG = 054°, TAS = 450 kt, Track (T) = 059°,	010/45kt	010/50kt	005/50kt	010/55kt	0	1	0	0
4586	61	Given: True HDG = 145°, TAS = 240 kt, Track (T) = 150°,	360/35kt	180/35kt	295/35kt	115/35kt	0	0	0	1
4587	61	Given: True HDG = 002°, TAS = 130 kt, Track (T) = 353°,	095/25kt	095/20kt	090/15kt	090/20kt	0	1	0	0
4588	61	Given: True HDG = 035°, TAS = 245 kt, Track (T) = 046°,	335/55kt	340/45kt	340/50kt	335/45kt	0	0	1	0
4589	61	Given: course required = 085° (T), Forecast W/V 030/100kt, TAS = 470 kt,	096°, 29 MIN	095°, 31 MIN	075°, 39 MIN	076°, 34 MIN	0	0	1	0
4590	61	Given: True course from A to B = 090°, TAS = 460 kt, W/V = 360/100kt,	069° - 448 kt	068° - 460 kt	078° - 450 kt	070° - 453 kt	1	0	0	0
4591	61	For a landing on runway 23 (227° magnetic) surface W/V reported by the ATIS is 180/30kt. VAR is 13° E.	20 kt	22 kt	26 kt	15 kt	0	1	0	0
4592	61	Given: true track is 348°, drift 17° left, variation 32° W,	033°	007°	359°	337°	1	0	0	0
4593	61	Given: Maximum allowable tailwind component for landing 10 kt. Planned runway 05 (047° magnetic). The direction of the surface wind reported by ATIS 210°. Variation is 17°E. Calculate the maximum allowable windspeed that can	18 kt	8 kt	15 kt	11 kt	0	0	0	1
4594	61	Given: True HDG = 133°, TAS = 225 kt, Track (T) = 144°,	075/50kt	075/45kt	070/40kt	070/45kt	0	1	0	0
4595	61	Given: TAS = 190 kt, HDG (T) = 355°,	1R - 165 kt	1L - 215 kt	1L - 225 kt	1R - 175 kt	0	1	0	0
4596	61	Given: TAS = 140 kt, HDG (T) = 005°,	11R - 142 kt	11R - 140 kt	10R - 146 kt	9R - 140 kt	0	0	1	0

4597	61	Given: TAS = 465 kt, Track (T) = 007°,	358 - 428 kt	001 - 432 kt	000 - 430 kt	357 - 430 kt	1	0	0	0
4598	61	Given: TAS = 485 kt, HDG (T) = 168°,	175 - 420 kt	175 - 432 kt	174 - 428 kt	173 - 424 kt	0	0	1	0
4599	61	Given: TAS = 230 kt, HDG (T) = 250°,	1L - 225 kt	1R - 221 kt	2R - 223 kt	2L - 224 kt	0	0	1	0
4600	61	Given: TAS = 90 kt, HDG (T) = 355°,	358 - 101 kt	359 - 102 kt	346 - 102 kt	006 - 95 kt	0	0	1	0
4601	61	Given: TAS = 132 kt, HDG (T) = 053°,	057 - 144 kt	052 - 143 kt	051 - 144 kt	050 - 145 kt	0	0	0	1
4602	61	Given: TAS = 205 kt, HDG (T) = 180°,	4L - 195 kt	6L - 194 kt	7L - 192 kt	3L - 190 kt	0	1	0	0
4603	61	Given: TAS = 250 kt, HDG (T) = 029°,	1L - 205 kt	1R - 205 kt	1L - 265 kt	1R - 295 kt	1	0	0	0