



Geological Society of India

INTERNATIONAL EARTH SCIENCE OLYMPIAD 2013 – Entrance Test

Date: April 28, 2013; Time: 10.30 am to 12 noon

Name of the Test Centre: _____

Seal of the Test Centre: _____

INSTRUCTIONS

1. You will not be permitted to leave the examination hall until after 30 minutes of commencement of the test.
2. If you have any paper/chit/ mobile phone with you, surrender them to the invigilator NOW.
3. Please use a BLACK/BLUE ball point pen to mark your answers. DO NOT use pencil.
 - Each question has FOUR options. Choose the MOST appropriate one.
 - Darken the circle corresponding to the answer of your choice. For example:

Q.No.	A	B	C	D
1	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

indicates that the correct answer is B.

- Marks will not be awarded if more than one answer is chosen.
 - There will be **no negative marking**.
4. Your answer must be given only in the answer sheet (overleaf). **Answers given anywhere else will not be valued.**
 5. **The answer sheet along with the question paper should be handed over to the invigilator at the end of the test.**
 6. Please DO NOT tear out or add any sheet from/to the question paper.
 7. Please enter your name, registered / serial no. school name, and affix your signature overleaf before starting to answer the questions.

IESO – 2013 Entrance Test

ANSWER SHEET

Candidate's Name: _____ Reg. / Sl. No.: _____

Name of School: _____

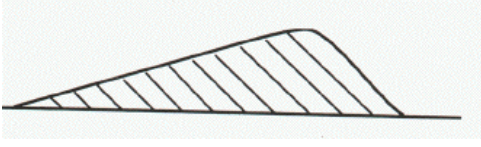
Candidate's Signature: _____ Invigilator's Signature: _____

Q.No	A	B	C	D	Q.No.	A	B	C	D	Q.No.	A	B	C	D	Q.No.	A	B	C	D
1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	26	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	51	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	76	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	27	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	52	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	77	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	28	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	53	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	78	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	29	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	54	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	79	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	30	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	55	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	80	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	31	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	56	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	81	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	32	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	57	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	82	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	33	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	58	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	83	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	34	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	59	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	84	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	35	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	60	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	85	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	36	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	61	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	86	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	37	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	62	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	87	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	38	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	63	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	88	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	39	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	64	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	89	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	40	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	65	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	90	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	41	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	66	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	91	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	42	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	67	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	92	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	43	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	68	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	93	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	44	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	69	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	94	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	45	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	70	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	95	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	46	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	71	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	96	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	47	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	72	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	97	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	48	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	73	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	98	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	49	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	74	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	99	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	50	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	75	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	100	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q. No.	QUESTIONS
1	<p>What is the chemical composition of the mineral <i>talc</i> commonly used in paper, paint, ceramic and other industries?</p> <p>A. Hydrous silicate of aluminium B. Hydrous silicate of potassium C. Hydrous silicate of magnesium D. Aluminium oxide</p>
2	<p>The purple variety of quartz known as <i>amethyst</i> owes its colour to _____.</p> <p>A. Manganese B. Magnesium C. Titanium D. Calcium</p>
3	<p>_____ is the plane of weakness along which a mineral can be easily split.</p> <p>A. Fracture B. Cleavage C. Crack D. Pitch</p>
4	<p>An igneous rock with a mixture of fine and large grains of minerals is called _____.</p> <p>A. Porphyry B. Pegmatite C. Pitchstone D. Breccia</p>
5	<p>Which of the following rocks floats on water?</p> <p>A. Pumice B. Dunite C. Obsidian D. Basalt</p>
6	<p>What is the term used to describe a mixture of minerals, gases and molten rock found underneath the earth's crust?</p> <p>A. Melt B. Lava C. Magma D. Mantle</p>
7	<p>A wall like intrusive of an igneous rock is called a _____.</p> <p>A. Sill B. Batholith C. Dyke or dike D. Boss</p>
8	<p>_____ is a rock characterised by parallel to sub parallel arrangement of platy minerals.</p> <p>A. Schist B. Gneiss C. Granite D. Dolerite</p>
9	<p>_____ is a metamorphic rock with bands of light and dark minerals (usually quartz-feldspar and micas).</p> <p>A. Slate B. Schist C. Phyllite D. Gneiss</p>

10	<p>What is the common term used to describe the changes in mineralogy a rock undergoes when it is intensely heated by an igneous intrusive?</p> <p>A. Hydrothermal metamorphism B. Contact metamorphism C. Cataclastic metamorphism D. Regional metamorphism</p>
11	<p>A measure of the energy released during an earthquake is measured on a scale known as the ____.</p> <p>A. Richter scale B. Mercalli scale C. Beaufort scale D. Mohorovicic scale</p>
12	<p>_____ is the shape that the surface of the oceans would take under the influence of gravity alone.</p> <p>A. Geoid B. Reference ellipsoid C. Geode D. Spheroid</p>
13	<p>What type of a tectonic boundary exists between the Indian-Australian plate and the Eurasian plate?</p> <p>A. Constructive B. Conservative C. Destructive D. Continent/ continent collision</p>
14	<p>A combination of shallow earthquakes, volcanism and contact metamorphism characterises a _____.</p> <p>A. Transform fault boundary B. Spreading center C. Subduction zone D. Continent/ continent margin</p>
15	<p>_____ is an example of a chemical sedimentary rock.</p> <p>A. Sandstone B. Shale C. Conglomerate D. Halite</p>
16	<p>Cross-beds form when sediment is deposited in a _____ current of water or air.</p> <p>A. Weak B. Very Weak C. Moderate D. Strong</p>
17	<p>The two important constituents of limestone are _____.</p> <p>A. Calcite and Aragonite B. Calcite and Gypsum C. Calcite and Dolomite D. Aragonite and Dolomite</p>
18	<p>The rock composed of large (> 2mm dia.) angular particles is known as _____.</p> <p>A. Sandstone B. Limestone C. Conglomerate D. Breccia</p>
19	<p>Corals belong to _____ class.</p> <p>A. Scyphozoa B. Hydrozoa C. Anthozoa D. Bryozoa</p>

20	The first land plants appeared in _____. A. Cambrian B. Ordovician C. Silurian D. Devonian
21	The main source of limestone is _____. A. Gastropod Shells B. Lamellibranch Shells C. Inorganic Material D. Coral Reefs
22	Gastropods are also known as _____. A. Snails B. Lamellibranchs C. Scaphopods D. Pelecypods
23	Giant reptiles and ammonites disappeared at the end of _____. A. Triassic B. Jurassic C. Cretaceous D. Permian
24	Fossils are found mainly in _____ rocks. A. Igneous B. Sedimentary C. Metamorphic D. Volcanic
25	The winter season in the Northern Hemisphere is shorter than summer because A. The Earth is closer to the Sun during winter in the Northern Hemisphere B. The Earth is farthest from the Sun during winter in the Northern Hemisphere C. The Northern Hemisphere has more land area than the Southern Hemisphere. D. There is no continent at the North Pole
26	This most common mineral on the Earth is used in chronometers. A. Diamond B. Quartz C. Calcite D. Ruby
27	If the distance between two villages on the ground is 15 km and the distance between the same two villages on a map is 3 cm, then the scale of the map is A. 1:5,000 B. 1:50,000 C. 1:500,000 D. 1:5000,000
28	Excessive _____ in soil will result in good drainage. A. Gravel B. Sand C. Silt D. Clay
29	Acid-generating cations in soil solution include ions of A. Aluminum, Potassium Sodium B. Aluminum, Hydrogen C. Hydrogen, Potassium, Calcium D. Hydrogen, Magnesium, Sodium
30	A line connecting points of equal precipitation is a A. Contour

	<p>B. Isohyet C. Isohaline D. Isobar</p>
31	<p>If the contour interval of a topographic map is doubled, how many contour lines are needed to show the same increase in elevation?</p> <p>A. Half as many B. Twice as many C. The same number D. Variable depending upon the terrain</p>
32	<p>In the cross section of a sand dune given below, the wind was blowing from _____.</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>A. Left to right B. Right to left C. Bottom to top D. Top to bottom</p> </div> </div>
33	<p>Which of the following is not a likely impact of deforestation and increased grazing intensity?</p> <p>A. Reduced infiltration capacity B. Increased infiltration capacity C. Greater infiltration-excess overland flow generation D. Increased stream discharge variability</p>
34	<p>In the sub-tropics, the driest hot deserts are found in the</p> <p>A. Western coastal regions of the continents B. Eastern coastal regions of the continents C. Continental interiors D. Highland plateaux</p>
35	<p>According to Darcy's law, groundwater flow is assumed to be _____.</p> <p>A. Laminar B. Turbulent C. Zigzag D. Both (a) and (b).</p>
36	<p>The ability of a saturated rock to hold water after drainage due to gravity is called _____.</p> <p>A. Specific storage B. Specific retention C. Specific yield D. Storativity</p>
37	<p>A perched aquifer occurs in _____ zone.</p> <p>A. Saturated B. Aerated C. Artesian D. Confined</p>
38	<p>The main source of freshwater on the earth is _____.</p> <p>A. Polar ice caps B. Oceans C. Rivers D. Groundwater</p>
39	<p>Runoff results after _____.</p> <p>A. Saturation of soil B. Satisfying the losses C. Infiltration D. All of the above</p>

40	<p>The structure shown below forms in a _____ environment.</p> <div data-bbox="403 132 670 266" data-label="Image"> </div> <div data-bbox="943 134 1206 277" data-label="List-Group"> <ul style="list-style-type: none"> A. Glacial B. Tidal mud flat C. Deep ocean D. Shallow sea </div>
41	<p>The primary structure shown below is known as _____.</p> <div data-bbox="395 324 759 461" data-label="Image"> </div> <div data-bbox="925 322 1225 468" data-label="List-Group"> <ul style="list-style-type: none"> A. Graded bedding B. Current bedding C. Rhythmic bedding D. Cross bedding </div>
42	<p>Which of the following is a type of stress?</p> <ul style="list-style-type: none"> A. Compression B. Tension C. Shear D. All of the above
43	<p>Folding occurs when rocks behave as _____.</p> <ul style="list-style-type: none"> A. Ductile solids B. Frozen solids C. Fluids D. Brittle solids
44	<p>A structural basin is a special case of _____.</p> <ul style="list-style-type: none"> A. A freak of nature B. An anticline C. A syncline D. A dome
45	<p>Faults where displacement is both vertical and horizontal are called</p> <ul style="list-style-type: none"> A. Oblique faults B. Slippery faults C. Complex faults D. Ordinary faults
46	<p>An extra-tropical storm originating in the Mediterranean that brings sudden winter rain and snow to the northwestern parts of India is called _____.</p> <ul style="list-style-type: none"> A. Northwest Monsoon B. Anticyclone C. Westerly disturbance D. Tropical cyclone
47	<p>The rate of change of temperature with height is called _____.</p> <ul style="list-style-type: none"> A. Troposphere B. Vertical velocity C. Global warming D. Lapse rate
48	<p>Geostrophic flow is the balance between the following forces:</p> <ul style="list-style-type: none"> A. Coriolis and curvature B. Coriolis and friction C. Coriolis and pressure gradient D. Coriolis and gravity
49	<p>The sky appears blue because of _____.</p> <ul style="list-style-type: none"> A. Refraction B. Reflection C. Scattering D. Cosmic rays
50	<p>Condensation results in the release of _____</p> <ul style="list-style-type: none"> A. Sensible heat

	<p>B. Long-wave radiation</p> <p>C. Photons</p> <p>D. Latent heat</p>
51	<p>The atmospheric circulation which features rising motion near the equator, pole-ward flow 10–15 kilometers above the surface, descending motion in the subtropics, and equator-ward flow near the surface is known as the_____</p> <p>A. Walker cell</p> <p>B. Hadley Cell</p> <p>C. Ferrel cell</p> <p>D. Equator cell</p>
52	<p>Which of the following is NOT a greenhouse gas?</p> <p>A. N₂O</p> <p>B. O₃</p> <p>C. N₂</p> <p>D. H₂O</p>
53	<p>The fraction of incoming solar radiation reflected by the earth is called _____.</p> <p>A. Albedo</p> <p>B. Alameda</p> <p>C. Absorptivity</p> <p>D. Attenuation</p>
54	<p>The jet streams move from _____.</p> <p>A. West to east</p> <p>B. East to west</p> <p>C. South to north</p> <p>D. North to south</p>
55	<p>Chlorofluorocarbons (CFC's) were banned because they were found to _____.</p> <p>A. Produce ozone</p> <p>B. Produce NO_x</p> <p>C. Produce poisonous gases</p> <p>D. Deplete ozone</p>
56	<p>The annual temperature range of Delhi is greater than that of Mumbai because _____.</p> <p>A. Delhi is at a higher latitude</p> <p>B. Delhi is not on the coast</p> <p>C. Delhi is at a higher altitude</p> <p>D. Delhi is at a higher longitude.</p>
57	<p>Large volcanic eruptions result in a large amount of _____ in the stratosphere which scatter solar radiation causing cooling of the surface.</p> <p>A. CO₂</p> <p>B. Sulphate aerosols</p> <p>C. Carbonaceous aerosols</p> <p>D. Water droplets</p>
58	<p>As temperature increases, the _____ of air increases exponentially.</p> <p>A. Lifting condensation level</p> <p>B. Cloud condensation nuclei</p> <p>C. Saturation vapour pressure</p> <p>D. Density</p>
59	<p>Tropical cyclones are formed over _____.</p> <p>A. Warm desert regions</p> <p>B. Warm tropical oceans</p> <p>C. Cold tropical ocean regions</p> <p>D. Warm equatorial oceans</p>

60	<p>The _____ appears as a band of clouds, usually thunderstorms, which circle the globe near the equator.</p> <p>A. South Pacific Convergence Zone B. Monsoon C. Inter-Tropical Convergence Zone D. Ferrel Cell.</p>
61	<p>A bathythermograph measures which of the following parameters:</p> <p>A. Temperature and salinity B. Temperature and density C. Depth and temperature D. Depth and density</p>
62	<p>The interface between rivers and oceans is called a _____.</p> <p>A. Continental rise B. Continental margin C. Continental slope D. Estuary</p>
63	<p>Which is the main source of protein from the oceans for humans?</p> <p>A. Fish B. Sea weed C. Corals D. Sea shells</p>
64	<p>Diurnal tides occur</p> <p>A. Once a day B. Twice a day C. Once in two days D. Once in two weeks</p>
65	<p>Knot is a measure of</p> <p>A. The strength of a rope B. A sailor's ability C. Speed D. A nautical mile</p>
66	<p>Which of the following is NOT dangerous for swimmers in the sea?</p> <p>A. Sea shells B. Tsunami C. Sharks D. Rip currents</p>
67	<p>The maximum depth to which sunlight penetrates the ocean depends on which of the following properties of sea water?</p> <p>A. Temperature B. Turbidity C. Salinity D. Density</p>
68	<p>Dissolved carbon dioxide in the oceans is measured in units of _____.</p> <p>A. gram B. millimole/kg C. cc D. ml/m²</p>
69	<p>In an ocean map, contours connecting points of equal density are known as _____.</p> <p>A. Isotherms B. Isopycnals C. Isohyets D. Isohalines</p>
70	<p>The typical mass of a 10 cc volume of sea water is _____ grams.</p>

	A. 9.9 B. 12.0 C. 5.3 D. 10.2
71	Surface ocean currents are driven by _____. A. Winds B. Earth's rotation C. Sea floor topography D. Direct solar heating
72	Equatorial excess heat is transported polewards mainly by _____. A. Trade winds B. Cold deep ocean currents C. Coriolis force D. Warm ocean surface currents
73	Measurement of conductivity of sea water helps in determining its _____. A. Temperature B. Salinity C. Depth D. Density
74	The most abundant positive ion in sea water is _____. A. Ca^{++} B. Na C. K^{+} D. Al^{+++}
75	The most abundant anion in sea water is _____. A. CO_3^{--} B. Cl^{-} C. SO_4^{-} D. NO_3^{-}
76	Carbon fixation by marine plankton happens because of the presence of _____. A. Chlorophyll-a B. Bacteria C. Viruses D. Fungi
77	The highest phytoplankton bloom occurs in the Arabian Sea during _____. A. Spring B. Winter C. Monsoon D. Autumn
78	Oceans in the Northern Hemisphere receive maximum solar heat during _____. A. July B. January C. March D. October
79	Surface waters of the Bay of Bengal are less saline compared to the surface waters of the Arabian Sea because of _____. A. More fresh water discharge from rivers to the Bay of Bengal B. Higher evaporation from the Bay of Bengal C. Less evaporation from the Arabian Sea D. More rain over the Arabian Sea
80	The saltiest sea in the world is the _____. A. Black Sea

	<p>B. Dead Sea</p> <p>C. Yellow Sea</p> <p>D. Red Sea</p>
81	<p>Stars on the Main Sequence _____.</p> <p>A. Convert helium to hydrogen in their centres.</p> <p>B. Convert helium to carbon in their centres</p> <p>C. Convert hydrogen to helium in their centres</p> <p>D. Have no fusion in their centres</p>
82	<p>Venus is closest to the Earth when</p> <p>A. It is full (bright side faces the Earth)</p> <p>B. It is dark (dark side faces the Earth)</p> <p>C. It is half lit</p> <p>D. None of the above</p>
83	<p>Constellations are groups of stars related by</p> <p>A. Brightness</p> <p>B. Spectral type</p> <p>C. Apparent position in the sky</p> <p>D. Physical location in the Galaxy</p>
84	<p>Polaris was not the North Star in the past. This is because of</p> <p>A. The motion of the Earth around the Sun.</p> <p>B. The rotation of the Earth.</p> <p>C. The motion of the Sun through the Galaxy.</p> <p>D. The precession of the Earth's rotation axis</p>
85	<p>Energy from the Sun is due to</p> <p>A. Fusion of hydrogen in the core</p> <p>B. Gravitational contraction</p> <p>C. Chemical reactions</p> <p>D. Fission of uranium in the core</p>
86	<p>Voyager is now about</p> <p>A. 1 A.U. from the Sun</p> <p>B. 100 A.U. from the Sun</p> <p>C. 1 light year from the Sun</p> <p>D. 1 pc from the Sun</p>
87	<p>A sunspot is a region of the Sun's surface that is</p> <p>A. Hotter than its surroundings</p> <p>B. Cooler than its surroundings</p> <p>C. Higher than its surroundings</p> <p>D. Deeper than its surroundings</p>
88	<p>Paris is about 1/4 of the way around Earth from Chicago. On a night when people in Chicago see a first quarter moon, people in Paris see</p> <p>A. A new moon</p> <p>B. A first quarter moon</p> <p>C. A full moon</p> <p>D. Any of the above, depending upon the time of night</p>
89	<p>The Moon is receding from the Earth because of</p> <p>A. Pressure from escaping gases in the Earth's atmosphere</p> <p>B. Tidal forces between the Earth and the Moon</p> <p>C. Pressure from the Solar wind</p> <p>D. It is not receding from the Earth</p>
90	<p>In order to evaluate Hubble's constant, what quantities should we measure?</p> <p>A. Redshift and distance</p> <p>B. Flux and redshift</p> <p>C. Flux and distance</p>

	<p>D. Radial velocity and flux</p> <p>E.</p>
91	<p>Which of the following is NOT a piece of evidence in favor of the Big Bang theory?</p> <p>A. The discovery of heavier elements in the oldest stars</p> <p>B. The background radiation</p> <p>C. The abundance of helium in the universe</p> <p>D. The expansion of the galaxies</p>
92	<p>Pluto is not a planet because</p> <p>A. It is too small</p> <p>B. It is too far away</p> <p>C. It has not cleared its neighbourhood of other objects</p> <p>D. It is a planet</p>
93	<p>The Earth's core is made up of iron because</p> <p>A. The early Earth was molten</p> <p>B. The mantle and crust were deposited after the core formation from meteor impact</p> <p>C. It was magnetically attracted to the center of the Earth</p> <p>D. Volcanic action</p>
94	<p>The apparent path of the Sun across our sky, day by day throughout the year is known as</p> <p>A. The celestial equator</p> <p>B. The celestial meridian</p> <p>C. The Tropic of Cancer</p> <p>D. The ecliptic</p>
95	<p>The autumnal equinox is that time of the year when</p> <p>A. The Sun crosses the equatorial plane, moving south</p> <p>B. The Sun crosses the galactic equator</p> <p>C. The earth is at its closest point to the Sun</p> <p>D. The Sun crosses the ecliptic plane, moving south</p>
96	<p>A star with a temperature of 10,000 K will have a surface brightness</p> <p>A. Twice that of the Sun</p> <p>B. Half that of the Sun</p> <p>C. Sixteen times that of the Sun</p> <p>D. Four times that of the Sun</p>
97	<p>The Milky Way is</p> <p>A. The asteroid belt</p> <p>B. The disk of the Galaxy</p> <p>C. The ecliptic plane</p> <p>D. The nearest galaxy to ours</p>
98	<p>A total solar eclipse occurs when</p> <p>A. The Moon is full</p> <p>B. The Moon is new</p> <p>C. The Earth is closest to the Sun</p> <p>D. Can occur at any time</p>
99	<p>The danger to satellites is greatest</p> <p>A. When the Moon is closest to the Earth</p> <p>B. In the daytime</p> <p>C. When there are many sunspots</p> <p>D. When the Earth is closest to the Sun</p>
100	<p>The evidence for dark energy comes from</p> <p>A. The rotation curves of galaxies</p> <p>B. The motion of the planets</p> <p>C. Hubble's Law</p> <p>D. Supernovae at high redshifts</p>