VIVEK TUTORIALS

Geography
Preliminary Examination
MODEL ANSWER
Max Marks: 80

Date : 10/Feb/2019 **Grade: 10th (ICSE)** **Time: 2 Hours**

Section I (30 Marks)
(Attempt all questions from this part)

Question 1

Study the extract of the survey of India Map Sheet No. 45 D/10 and answer the following questions:

(a) (i) 1107. (ii) 1003. 20

(b) (i) 1606 - Radial, (ii) 1007 - Trellised.

(c) Two natural features seen in grid 0910 are : (i) seasonal dry stream; (ii) Palm trees.

(d) 8.1 km.

(e) (i) Universally accepted scale is Representative Fraction (RF).
(ii) The length of the given map is 9 km scale 2 cm = 1 km.

(f) (i) 111073; (ii) 177057.

(g) (i) Metalled road; (ii) Cart track.

(h) Two occupations are: (i) Cultivation; (ii) Forest related activities.

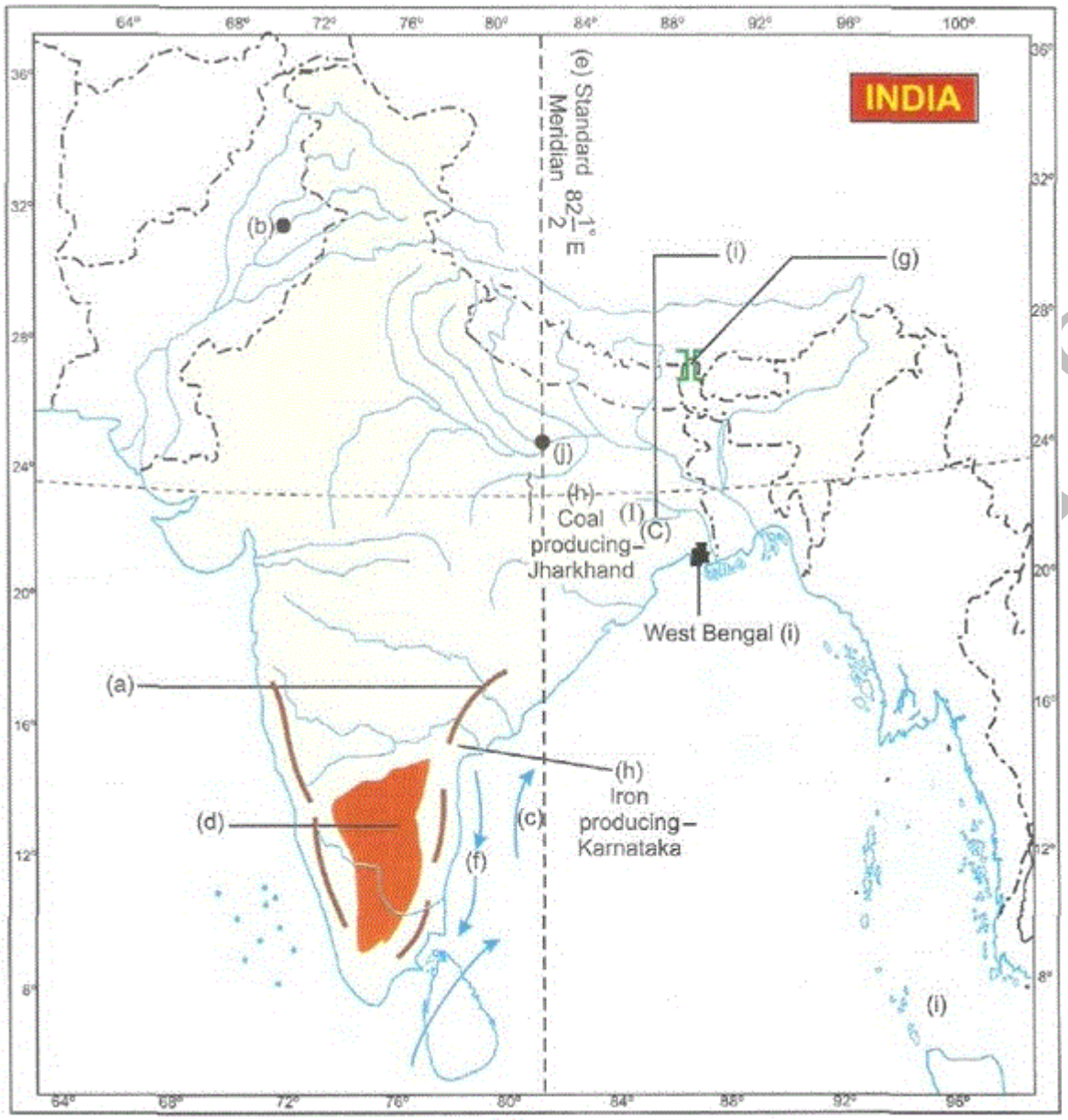
(i) Gentle slopes are shown by spacing contour lines far apart. Steep slopes are shown by closely placed contour lines.

(j) (i) 3r in 1103 shows relative height of the embankment built on a dry tank.
(ii) Open scrub shows that the area is not cultivable land but is used for sheep or goat rearing.

Question 2

On the outline map of India provided:

10



Section II (50 Marks)
(Attempt any Five questions from this part)

Question 3

(a) (i) (1) They originate from Arabian Sea and strike the Western Ghats and cause heavy rainfall above 250 cms. 2

(2) Their another branch moves towards North-East in a direction parallel to the Aravalli Hills and causes a very little rain in the Thar desert.

(ii) Violent thunder and lightening are associated with 'break' or 'burst' of monsoons.

(iii) Assam and West Bengal are affected by 'Kal Baisakhi'.

(b) (i) West Bengal and Assam. 2

(ii) First place – Kanyakumari
First state – Kerala.

(c) (1) Presence of Himalayas protects us from the cold northern winds. Without this temperature of some parts of India might have been too low. 3

(2) The Himalayas create barrier before the S-W monsoons and these monsoons cause heavy rainfall.

(3) The location of these seas has exerted a moderate influence on much of the Indian subcontinent.

(4) These seas have acted as the store house of moisture which India needs very badly.

(d) (i) The driest month is March with rainfall of only 1.3 cm. 3

(ii) The annual rainfall is 4.6 + 1.8 + 1.3 + 1.8 + 3.8 +, 4.5 + 8.7 + 11.3 + 11.9 + 30.6 + 35.0 + 13.9 = 129.2 cm.

(iii) The Annual Range of Temperature is 32.5 - 20.4 = 12.1°C.

Question 4

(a) Ganga, Brahmaputra valley, delta, coastal strip of peninsular India. 2
States–Punjab, Haryana, U.P., Bihar, West Bengal.

(b) Soil is an important natural resource because we derive everything that we need in our life from soil. 2
Primary food products like cereals, fruits, vegetables etc. are acquired directly from the soil and secondary food products such as milk, meat, honey, wool timber etc. are got indirectly from the soil. It supplies us material for building houses and also for industries. So soil is the basic resource for the development of our country's wealth.

(c) Bangar: 3
(i) It is non-porous and clayey soil.
(ii) It is found in the higher level in the plains near river's new terrace.
(iii) It is less fertile as compared to Khadar.
Khadar:
(i) It is porous and loamy soil.
(ii) It is found in the lower level in the plains at river terraces.
(iii) It is more fertile as compared to Bangar. This is due to deposition of new layers by floods during monsoon.

(d) (i) Laterite soil is found suitable for growing coffee in Karnataka. 3
(ii) The soils of Gangetic plains formed when the river deposits its load through its basin during its lower course.

Question 5

(a) (i) Medicinal product (ii) Handicrafts 2

(b) Two trees of Tidal forests are: 2
Sundari–Wood is hard, strong and durable and used for boat building and boxes.
Hintal and Garjan–They provide fuel for household.

(c) The trees which shed their leaves for about 6-8 weeks during the spring and early summer during March/April when sufficient moisture for leaves is not available and subsoil water is not enough for the trees to retain their leaves. 3
Monsoon or deciduous forests occur on the eastern part of south India because this region is the rain shadow region and receives not more than 100–150 cm. of rainfall.

(d) These are called the deciduous because they shed leaves for about six to eight weeks in summer in the face of water shortage. These are found in the North-eastern part of the Peninsula, i.e., around Chhota Nagpur plateau covering East Madhya Pradesh, South Bihar and West Orissa. These are also common in the Shiwalik ranges. 3

Question 6

(a) (i) The main drawback of tank is that they are non-perennial. They dug up in the summer. 2
(ii) Tanks are shallow. Due to high temperature, water is lost through evaporation.
(iii) The tanks occupy larger area which could be used for cultivation.

(b) Tube well is a personal property of the farmer and can be dug anywhere in his field. Water can be used as and when required. It is not affected by the failure of rain. 2

(c) i. The monsoon in India is uneven, erratic in nature and is unreliable. While it may rain well during one year, in another year, the rainfall may be scarce. Hence 3
Irrigation is necessary despite the monsoon.
ii The drip method of irrigation is the best among all modern methods of irrigation as in this method water is directly given to the crops through perforated pipes. This reduces evaporation and each crop may be irrigated according to its requirements.
iii Alkaline salts may come up to the ground in areas where canals are used for irrigation. This happens when the water table is only a few feet below the ground.
This salt when it mixes with the soil makes it unproductive.

(d) (i) Water is necessary for life on earth. It is believed that life first originated in water before it invaded land. Water is in fact a pre-condition of life. 3

(ii) Cultivation of crops depends on the availability of water. Water dissolves minerals and other nutrients in the ground. The roots of the plants draw this nutritious water from the soil. India is an agricultural country, so availability of water is a must.
(iii) Water is also important for industry. Its main function is for cooling.
(iv) Water is also used for drinking and domestic consumption. The growing urbanisation with its modern lifestyle has been demanding a greater share of water day-by-day.

Question 7

(a) Biogas: It is an energy gas which is produced from the organic waste such as farm waste, shrubs, animal and human waste. 2
(i) It is a non-conventional source of energy,
(ii) It has higher thermal efficiency in comparison to kerosene, cowdung, coal and charcoal.

(b) (i) Iron ore. 2
(ii) Orissa-Mayurbhanj, Sundergarh
Jharkhand-Singhbhum (Noamundi)
Chattisgarh-Durg and Bastar
Tamil Nadu-Salem and Madurai.

(c) (i) (i) Haematite is mainly available in India. 3
(ii) Processing of Magnetite is difficult.
(ii) The main oil fields in Gujarat are-Ankeleswar, Kalol, Kosamba. The biggest refinery is situated in Jamnagar under RIL.

(d) (i) Because it is the best quality of coal. 3
(ii) (a) To minimise the transport cost.
(b) To avoid the risk of transporting mineral oil inside the country due to its inflammable nature.
(iii) (a) It is the prime source of energy in the manufacturing of iron and steel.
(b) It is used as raw material in the chemical and other industries.

Question 8

(a) Cash crops are those crops which are grown by farmers to sell in the market not for use by the growers and his family. These are grown mostly on plantations. They provide raw material to the industries such as sugarcane, cotton etc. 2

(b) (i) Withering: This step removes the excess moisture from the tea leaves. 2
(ii) Rolling: To get the proper flavour, the leaves are twisted to break the cells. This step exposes the natural juices to fermentation.
(iii) Fermentation: In this step, tea leaves are partially oxidised to change the colour of the leaves.
(iv) Dying: In this process tea leaves are put on a conveyor belt and passed through an oven under high temperature.
(v) Sorting: Tea leaves are sorted according to decreasing size.
(vi) Blending: To maintain consistency in the flavour of tea throughout the year, different types of tea are blended together.

(c) (i) Subsistence type of agriculture is practised in India. 3
(ii) Major crop seasons are:
Kharif season-It extends from mid June to October. Rice, maize etc. are important crops.
Rabi season-It extends from November to April. The rabi crops are wheat, gram, mustard etc.
Zaid season-It extends from April to May. Seasonal fruits and vegetables are the crops of this season.

(d) (i) Ragi, jowar and bajra. 3
(ii) They can be grown on less fertile soil.
(iii) Gujarat and Andhra Pradesh

Question 9

(a) 1. Textile industry is spread all over the country, both in rural and urban sector as handloom and textile mills. 2
2. The industry is labour intensive and attracts large number of labour from all over the country.

(b) i. One important point of similarity between the wool industry and the silk industry is that both are the textile industries. 2

ii. State which produces most woollen products: Punjab State which produces most silk products: Karnataka

(c) 1. Raw material: The basic raw material for producing viscose yarn is the cellulose pulp derived from barnboo, eucalyptus and other soft wood trees. These trees are available in abundance. 3

2. Chemicals: Chemicals like caustic soda, sodium slphate, etc., are also easily, available.

3. Availability of water: The industry needs plenty f river water which is easily available.

4. Research and development facilities: Research and development facilities are also available. Mumbai, Ahmedabad, Surat, Hyderabad, Coimbatore, Kolkata, Gwalior, Delhi and Amritsar arc the major centres.

(d) 1. Molasses : It is used as organic fertilisers, cattle feed, fuel for mills and as raw material in the manufacturing of paper and fibre-board. 3

2. Bagasse : It is used as organic fertiliser, cattle-feed, fuel for mills and as raw material in the manufacturing of paper, fibre-board and synthetic fibres in textile industry.

3. Press Mud : It is used for making shoe polish, carbon paper and wax.

Question 10

(a) This industry is highly localised in the Chhotanagpur plateau region due to the presence of iron and coal in close proximity. Beside this, a large number of flux materials needed for purifying the molten metals like limestone, dolomite, chromium, nickel etc. all are available in Chhotanagpur plateau. 2

DVC provides HEP to the region.

The region is also connected to Kolkata port. Therefore, export and import facilities are provided.

(b) (i) The Hindustan Machine Tools - Bengaluru. (ii) The Praga Tools Ltd. - Secunderabad. 2

(c) Iron ore is always found with some impurities like sulphur, silica, phosphorus, lime, etc. So the impurities have to be removed to get pure iron ore used for making steel. The following process is used for converting iron ore into steel: 3

(a) Ore Reduction: The process of ore reduction is carried out in a blast furnace where the ore and coke are fed continuously from the tap. Small quantities of limestone and dolomite are also added as flux to help combine the impurities in the ore as slag. This slag floats on the molten iron and can be easily separated from it. Molten iron is collected at the base of the furnace at regular intervals. The product so obtained is known as pig iron. This pig iron can be converted into wrought iron, steel and cast iron.

(b) Steel Melting Furnaces: The pig iron obtained after reducing the ore contains upto 5 per cent of carbon and other impurities. To convert pig iron into steel, impurities are removed through deoxidation. Hardening materials including carbon are added to get the desired quality.

(c) Rolling Mills: The steel is then cast into ingots and rolled into different sizes.

(d) On the basis of raw materials and finished products, the industries can be classified into following heads : 1. Heavy industry : Industries using heavy and bulky raw materials and whose products are also heavy and bulky and that involve high cost of transport come under this category. For example : iron and steel industry, sugar industry and cement industry. 2. Light industry : Industries whose raw material as well as finished products are light and which can also employ female labour come under this category. For example : watch making, pen making, sewing machine making, radio and television. 3

Question 11

(a) (i) Inland waterways i.e., rivers, canals, backwaters and creeks should be deep enough to allow the slips and boats to navigate safely. 2

(ii) These waterways must also be free of barriers such as waterfalls and rapids.

(b) These are materials that occur naturally in the ecosystem mainly of plants and animal origins and the products made by these. 2

These wastes are harmless and non toxic in nature.

These are degradable and cause no pollution.

(c) The length of road per 100 sq. km of area is known as the density of roads. Distribution of road is not uniform in the country. Density of roads varies from only 10 km in Jammu and Kashmir to about 375 km in Kerala with the national average of around 75 km. 3

(d) The most hazardous of all wastes are radioactive wastes. It is generated from X-ray machines in hospitals and airports, and nuclear power stations. Radioactive elements such as uranium and thorium 3

possess fast moving atomic nuclei. During movement, it breaks, results in radiation emission which may be highly injurious. Special care has to be taken while dumping these wastes, some of it with water, seeps through the soil and mingles with ground water or gets carried into rivers and streams.