

CSM – 35/18
Geology
Paper – II

Time : 3 hours

Full Marks : 300

The figures in the right-hand margin indicate marks.

*Candidates should attempt Q. No. 1 from Section – A and Q. No. 5 from Section – B which are compulsory and **three** of the remaining questions, selecting at least **one** from each Section.*

SECTION – A

1. Answer any three of the following in about 200 words each : 20×3 = 60
- (a) Define a crystal and discuss the concept based on which crystals are classified into crystal systems.
 - (b) Describe the petrological microscope with special reference to nicol prism.

- (c) With neat sketches and suitable examples explain the classification of silicates.
- (d) What are alkaline rocks ? Add a note on their petrology and petrogenesis.
2. (a) What is meant by interference colour ? Describe how isotropic and anisotropic minerals behave under the microscope.
 $10+20 = 30$
- (b) Describe the physical, chemical and optical characters of the olivine group of minerals. Add a note on their paragenesis.
 $15+15 = 30$
3. (a) Write a critical review on the Deccan volcanic province. 30
- (b) What is meant by magmatic differentiation ? Explain the ternary crystallization of diopside – albite – anorthite system. $15+15 = 30$
4. (a) Give a comprehensive summary on the granulite terrains of India. $15+15 = 30$
- (b) What are sedimentary basins ? Write a short note on the intracratonic Cuddapah basin of peninsular India. $5+5+20 = 30$

SECTION – B

5. Answer any three of the following : $20 \times 3 = 60$
- (a) What are industrial minerals ? Describe the method of exploration and mining for getting the raw materials used in cement industry.
 - (b) Describe the processes involved in the formation of mineral deposits in general. Add a note on supergene enrichment.
 - (c) Give an account of various geological hazards and explain the causes. What possible steps are to be taken to deal with such disaster ?
 - (d) "The geochemical cycle provides a useful concept as a basis for the discussion of many aspects of geochemistry". Elaborate.
6. (a) Review the National mineral policy and add a note on the pros and cons of mining. 30
- (b) Discuss the concept of metallogenic province with special reference to India.

$15+15 = 30$

7. (a) Discuss the different methods of prospecting in general and the geophysical method in particular. $10+20 = 30$

(b) What is meant by ore dressing? Explain, in detail, the different ore dressing methods.

$5+5+10+10 = 30$

8. (a) What are path finder elements? Explain their significance in geochemical exploration.

$10+20 = 30$

(b) Ground water pollution has become a challenging problem in India. What are the causes for this and how to address the growing problem?

$5+10+15 = 30$



CSM – 36/18
Home Science
Paper – I

Time : 3 hours

Full Marks : 300

The figures in the right-hand margin indicate marks.

Candidates should attempt Q. No. 1 from Section – A and Q. No. 5 from Section – B which are compulsory and three of the remaining questions, selecting at least one from each Section.

SECTION – A

1. Answer any three of the following :
 - (a) Explain the classification, sources, functions, requirement and deficiencies of proteins. 20
 - (b) Explain the causes, symptoms and principles of dietary management of diabetes mellitus. 20
 - (c) Explain the importance, composition and nutritive value of Pulses and fleshy foods (meat, fish, poultry and egg). 20

- (d) Define BMR. Explain the methods of assess the BMR and factors affecting BMR. 20
2. (a) Explain the factors to be considered in planning therapeutic diets and dietary management for nephritis and liver cirrhosis. 30
- (b) Discuss, in detail, the role of Codex Alimentarius, Bureau of Indian Stanards (BIS) and Agmark, in controlling the food quality in India. 30
3. (a) Write a detailed account on digestion, absorption and metabolism of Carbohydrates and fat. 30
- (b) Explain the causes and affect of malnutrition on the vulnerable section of the society and the role of UNICEF, FTRI, ICDS and NIN in combating malnutrition. 30
4. (a) Discuss food poisoning and the adulterants used in foods associated with health hazards and the different methods used for detecting the Adulterants. 40

- (b) Explain, in detail, the causes of food spoilage and food contamination. 20

SECTION – B

5. Attempt any **three** sub-questions from those given below :
- (a) Enumerate the role of genetic and environment factors affecting human development. 20
- (b) Write, in detail, about Piaget's stages of development. 20
- (c) What do you understand about 'Personality Development' ? 20
- (d) How will you manage the exceptional children ? 20
6. What are the notable physical changes and development in adolescent group of both sexes ? And give a detailed picture on their emotional changes. 60

7. Write, in detail, about various problems encountered at each stages of family cycle and how will you solve the marital problems. 60

8. (a) How the problems faced by women, for eg, in case of dowry, divorce and employed could be managed? 45

(b) Write, in detail, about family relationships. 15

