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(NEP—2020)

(1st Semester)

CHEMISTRY

(Multi-disciplinary Course)

(Chemistry in Everyday Life)

Full Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

(SECTION : A—OBJECTIVE)

(Marks : 10)

Tick (✓) the correct answer in the brackets provided :

1×10=10

1. Which one of the following is biodegradable polymer?

- (a) PGA ()
- (b) PCTFE ()
- (c) BUNA-S ()
- (d) Nylon-6 ()

2. Which of the following is the naturally occurring polymer?

- (a) Polythene ()
- (b) Starch ()
- (c) Nylon ()
- (d) None of the above ()

3. Nylon-66 is obtained from
(a) hexamethylenediamine and adipic acid ()
(b) phenol and formaldehyde ()
(c) adipic acid and formaldehyde ()
(d) None of the above ()
4. The international standard for paper size is
(a) letter ()
(b) legal ()
(c) A4 ()
(d) None of the above ()
5. The tocopherol is the chemical name of
(a) vitamin E ()
(b) vitamin A ()
(c) vitamin D ()
(d) vitamin K ()
6. Increase of blood clotting time is due to lack of
(a) vitamin E ()
(b) vitamin A ()
(c) vitamin D ()
(d) vitamin K ()
7. Vitamin D is also known as
(a) growth vitamin ()
(b) sunshine vitamin ()
(c) reproductive vitamin ()
(d) None of the above ()
8. Which of the following are basic dyes?
(a) Glycerine and lactic acid ()
(b) Sodium chloride and carboxymethyl cellulose ()
(c) Bentonite and beeswax ()
(d) Mineral oil and olive oil ()

9. The dyes which are applied to the fabric in the colourless reduced state and then oxidized to coloured state are called
- (a) vat dyes ()
 - (b) disperse dyes ()
 - (c) triphenyl methane dyes ()
 - (d) azo dyes ()
10. A dye imparts red colour on fabric. What colour of light was absorbed by the dye?
- (a) Blue ()
 - (b) Red ()
 - (c) Green ()
 - (d) Orange ()

(SECTION : B—SHORT ANSWERS)

(Marks : 25)

Answer *five* questions, taking at least *one* from each Unit :

5×5=25

UNIT—I

1. Write three uses of polyvinyl chloride and two uses of polystyrene.
2. Write the application of plastics in automobile and in medical field.
3. What is polymer? How are they classified based on mode of synthesis?

UNIT—II

4. What are hair dyes? Classify and write its ideal properties.
5. Explain the principle involved in the formulation of face wash.
6. Write short notes on any *two* of the following :
 - (a) Direct dye
 - (b) Mordant dye
 - (c) Vat dye

UNIT—III

7. Explain iodine number and how it is determined.
8. Write the differences between fats and oils.
9. What is saponification number and how is it determined?

(SECTION : C—DESCRIPTIVE)

(Marks : 40)

Answer *four* questions, taking at least *one* from each Unit :

10×4=40

UNIT—I

1. Write a brief idea on manufacturing of paper.
2. What are biodegradable polymers? Give two examples.
3. Mention environmental hazard of polymers.

UNIT—II

4. Compare and contrast vanishing cream, cold cream and moisturizing cream.
5. What are natural and synthetic dyes? Discuss in detail about (a) indigo dye or (b) tyrian purple dye.
6. Discuss the various analytical specifications for shampoos as per the Bureau of Indian Standards (BIS).

UNIT—III

7. Explain the occurrence and deficiency of vitamins and minerals.
8. What are water-soluble and fat-soluble vitamins? Give examples.
9. What is rancidity? What are the different types of rancidity? Also mention factors affected rancidity.

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