SCIENCE SECOND REVISION TEST ENG MEDIUM 2022-23

10th Standard

Science

Date : 07-Feb-23

Reg.No. : | | | | | | |

Exam Time : 03:00:00 Hrs

Total Marks : 75

CHOOSE THE CORRECT ANSWER 12x 1 = 10

1) The unit of 'g' is m s^{-2}. It can be also expressed as

(a) cms^{-1} (b) Nkg^{-1} (c) Nm^2kg^{-1} (d) cm^2s^{-2}

2) The value of universal gas constant

(a) 3.81 $Jmol^{-1}$ K^{-1} (b) 8.03 $Jmol^{-1}$ K^{-1} (c) 1.38 $Jmol^{-1}$ K^{-1} (d) 8.31 $Jmol^{-1}$ K^{-1}

3) Powdered $CaCO_3$ reacts more rapidly than flaky $CaCO_3$ because of _____.

(a) large surface area (b) high pressure (c) high concentration (d) high temperature

4) Rectified spirit is an aqueous solution which contains about _____ of ethanol

(a) 95.5 % (b) 75.5 % (c) 55.5 % (d) 45.5 %

5) Oxygen is produced at what point during photosynthesis ?

(a) when ATP is converted to ADP (b) when CO_2 is fixed (c) when H_2O is splitted

(d) All of these

6) A patient with blood group O was injured in an accident and has blood loss. Which group of blood should be used by doctor for transfusion?

(a) O group (b) AB group (c) A or B group (d) all blood group

7) Node of Ranvier is found in

(a) muscles (b) axons (c) dendrites (d) cyton

8) Okasaki fragments are joined together by _____.

(a) Helicase (b) DNA polymerase (c) RNA primer (d) DNA ligase

9) The 'use and disuse theory' was proposed by _____.

(a) Charles Darwin (b) Ernst Haeckel (c) Jean Baptiste Lamarck (d) Gregor Mendel

10) Where you will create category of blocks?

(a) Block palette (b) Block menu (c) Script area (d) sprite

11) The volume occupied by 4.4 g of CO_2 at S.T.P

(a) 22.4 litre (b) 2.24 litre (c) 0.24 litre (d) 0.1 litre

12) In leeches there are _____pairs of nephridia.

(a) 18 (b) 15 (c) 17 (d) 12

write any 7 questions (question No 22 compulsory) 7 x 2 = 14

13) State the principle of moments.

14) Distinguish between ideal gas and real gas.

15) What will be the frequency sound having 0.20 m as its wavelength, when it travels with a speed of 331 m s^{-1}?

16) Define Hydrated salt.

17) Differentiate reversible and irreversible reactions.

18) How do detergents cause water pollution? Suggest remedial measures to prevent this pollution?

19) What is a cross in which inheritance of two pairs of contrasting characters are studied?

20) Which organism is considered to be the fossil bird?

21) Define genetic engineering.

22) Draw a diagram to show vegetative reproduction by stern.

write any 7 questions (question No 32 compulsory) 7 x 4 =28

23) What is called homologous series? Give any three of its characteristics?

24) List out the parasitic adaptations in leech.

25) Describe the structure and working of the human heart.

26) Write the events involved in the sexual reproduction of a flowering plant.
a. Discuss the first event and write the types.
b. Mention the advantages and the disadvantages of that event

27) Define Ethnobotany and write its importance.

28) What precautions can be taken for preventing heart diseases?

29) Explain the uses of radio isotopes in medicine field?

30) Give the applications of Avogadro's hypothesis.

31) Draw a transverse section of dicot leaf and label the parts

32) An electric iron consumes energy at the rate of 420 W when heating is at the maximum rate and 180 W when heating is at the minimum rate. The applied voltage is 220 V. What is the current in each case?

write all the questions 3x 7 = 21

33) a) State the universal law of gravitation and derive its mathematical expression.

(OR)

b) What is mean by reflection of sound? Explain:
a) reflection at the boundary of a rarer medium
b) reflection at the boundary of a denser medium
c) Reflection at curved surfaces

34) a) Derive the relationship between Relative molecular mass and Vapour density.

(OR)

b) The molecular formula of an alcohol is $C_4H_{10}O$. The locant number of its –OH group is 2.
(i) Draw its structural formula.
(ii) Give its IUPAC name.
(iii) Is it saturated or unsaturated?

35) a) Why are leucocytes classified as granulocytes and agranulocytes? Name each cell and mention its functions.

(OR)

b) Explain with an example the inheritance of dihybrid cross. How is it different from monohybrid cross?

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