MACRO VISION ACADEMY, BURHANPUR

SAMPLE ENTRANCE TEST PAPER 2017-18

Class: XI   BIOLOGY   Time : 3 hr   M.M.: 100

English (20)

Q.1   Read the passage given below and answer the following questions

The 'Little Tramp', the unforgettable character Charlie Chaplin invented, was bom purely by accident in 1915. While rushing to a film shoot in California, he grabbed clothes other people had left behind in the changing room. And when he emerged, he found he had created a personality everybody loved. A little guy in a bowler hat, a close-fitting jacket, a cane, outsize shoes and a brush-like moustache!

Before long, Chaplin found himself a star. That puzzled him, for he saw himself essentially as a shy British Music hall comedian. The U.S. acknowledged him as its king of silent film comedy. Soon, so did crowds all over the world.

But life wasn't always a laugh for Charles Spencer Chaplin. Both his parents were Music Hall artists, who separated when Charlie was very young. His childhood was very sad, for his mother never earned enough to look after Charlie and his older brother, Sydney. Sometimes, Chaplin had to sleep on the streets and forage for food in the garbage.

Charlie took his first bow on stage when his mother made her last appearance. It happened when her voice broke during a song. Her son stepped on stage and sang a popular song. That's when a star was bom.

Through all these years of success, Charlie never forgot his troubled childhood. It made him recall a Christmas when he was denied two oranges and his bag of sweets for breaking a rule at the orphanage he went to after his mother's death. It would have broken his heart, if the other children had not offered him a share of theirs. Spontaneously, the adult Chaplin gifted the orphanage with a motion picture machine and insisted that each child should have as many oranges and sweets as they pleased.

Answer the following questions :

(a) Which unforgettable character did Charlie Chaplin invent ? ;   1

(b) Describe the personality created by Charlie, whom everybody loved.   1

(c) What did Charlie see himself as ?'   1

(d) Give two reasons to show that his early life was very sad.   1

Do as directed:

(e) The word that means 'to search for food' is............(para 3)   1

(f) What is meant by the word 'invented' ? (para 1)   1

(g) Find the word in the passage opposite in meaning to 'bold' ? (para 2)   1

(h) Find the word opposite in meaning to 'failure' ? (para 5)   1

Q.2 'Enjoying a cup of tea while sitting on my balcony on a Sunday morning, suddenly I felt a deep pain in my chest. I thought that this was the last moment of my life. 1 wanted to call my daughter, my husband and everybody to say the final Good Bye, but couldn't do so ....'

                                                           3

Imagine what happened after this. Did the family know what happened or did the woman die unnoticed ? Explain what were the plans and aspirations of the woman at the last moment of her life. Write an imaginary story with a suitable title in 150-200 words.

Q.3 Write a letter to the editor of an English daily, making a plea to the common people to switch over to solar energy to conserve electricity and limit electricity bills.   3

Q.4 Read the following passage and fill in the blank with the given options in the bracket.   3

Before alighting, the Wild Pigeon, like the Carolina Parrot and a few other species of birds, breaks the force of its flight by repeated flapping, (a) ....(so/although/even/as if) apprehensive of receiving injury from coming too suddenly (b)............(with/in/inside/at) contact, either with the branch, (c)...............(or/and/neither/nor) the spot of ground on which it intends to settle.

Q.5 Rearrange the following to make meaningful sentences. The first one has been done as an example: 3

e.g., stands/a/at/population/tiger/in/slim 1411/India/the/today The tiger population stands at a slim 1411 in India today.

(a) concemed/the/really/Indian/are/authorities

(b) tigers/the/of/population/falling/is/sharply

(c) considered/was/tigers,/Sariska,/for/sanctuary/a/which/tigers   left/have/any/does not

(d) for many/on/relied/dogs/people have/generations

(e) companionship/used/they/for hunting/have been/and

(f) very/a dog's/are/and ears/sensitive/nose

Mathematics (20)

Each question carries 1 marks.

Q.6 Find a quadratic polynomial, the sum and product of whose zeros are -5 and 6 respectively.   1

Q.7 Show that the equation $3x^2 + 7x + 8 = 0$ is not true for any real value of x.   1

Q.8 A die is thrown once. What is the probability of getting a prime number ?   1

Each question carries 2 marks.

Q.9 Solve for x and y : $\dfrac{ax}{b} - \dfrac{by}{a} = a + b,\ ax - by = 2ab$

2

Q.10 If $\sec\theta = \dfrac{5}{4}$, show that $\dfrac{(2\cos\theta - \sin\theta)}{(\cot\theta - \tan\theta)} = \dfrac{12}{7}$

2

Q.11 The area of a right-angled triangle is 600 sq. cm. If the base of the triangle exceeds the altitude by 10 cm, find the dimensions of the triangle. 2

Q.12 The sum of the 4th and 8th terms of AP is 24 and the sum of its 6th and 10th terms is 44. Find the first three terms of the AP. 2

Each question carries 3 marks.

Q.13 Prove each of the following identities $\dfrac{\sin\theta}{(1 + \cos\theta)} + \dfrac{(1 + \cos\theta)}{\sin\theta} = 2\cos ec\theta$

3

Q.14 Find the mean of the following data : 3

Class interval	0-10	10-20	20-30	30-40	40-50
Frequency	12	16	6	7	9

Q.15 The perimeter of a sector of a circle of radius of values 5.6 cm, is 27.2 cm. Find the area of the sector. 3

Biology (30)

Each question carries 2 marks.

Q.16 Reproduction is linked to stability of population of a species justify.

Q.17 What happens at the synapse b/w too neurons?

Q.18 Diff b/w artery & vein.

Q.19 Although coal & petroleum are produced by degradation of bio-mass, get we need to conserve them. Why?

Q.20 Suggest few measures of unrolling CO_2 levels in atmosphere.

Q.21 Diff. b/w biodegradable & non-biodegradable substances.

Q.22 Explain role of dew posers in env.

Each question carries 4 marks.

Q.23 Explain some harmful effects of agricultural practices on the enu.

Q.24 Does geographical isolation of individuals of a species lead to formation of a new species? Explain.

Q.25 Nervous & hormonal systems together perform the function of control & coordination in lumens justify.

Q.26 Describe SIDS & mention ways to prevent them.

Chemistry (15)

Each question carries 1 mark.

Q.27 Give the parent formula of alkene & alkyne. 1

Q.28 Which of the following is carboxylic acid; 1

$C_2H_4O_2$, C_2H_4O, C_2H_6O, $C_3H_6O_2$ draw the structure also.

Q.29 Give two examples of elements of groups 2 & 17. 1

Each question carries 2 marks.

Q.30 Select alkene and alkyne from the following. 2

C_6H_{12}, C_3H_4, C_2H_4, CH_4, C_4H_8, C_5H_8

Q.31 Draw electron dot structure of CO_2, H_2O, CH_4, N_2 2

Q.32 How would the tendency to lose electrons change as you go 2

i. From left to right across a period   ii. Down a group

Each question carries 3 marks.

Q.33 name- 3

a) Three elements that have a single electron in their outermost shells.

b) Two elements that have two electrons in their outer-most shells.

c) Three elements with filled outermost shell.

Q.34 Draw the structure of the following 3

a) 2- chloro but anal   b) Hex-2-ene   c) 2,2- diethyl propane   d) pentanol

e) propanoic acid   f) Hept – 3 – yne

Physics (15)

Each question carries 1 mark.

Q.35 Write two advantages of solar cells? 1

Each question carries 2 mark.

Q.36 What are the factors on which resistance of conductor depends? 2

Each question carries 3 marks.

Q.37 Calculate the resistance of copper wire of length of 1 m and area of cross- section 2mm^2.the resistivity of copper is 1.7×10^{-8} ohm-meter? 3

Q.38 Explain faraday's law of electromagnetic induction? 3

Q.39 An object is placed in front of a concave mirror of radius of curvature 40 cm at a distance of 10 cm. Find the position, nature and magnification of the image? 3

Q.40 What is Myopia? State two cause of myopia with labeled diagram show:

(i) The eye defect myopia   (ii) correction of myopia using lens. 3