

Reg. no.:

Date: 13-04-2018 ( 1PM )

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| **ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27** |  |
| **B.Sc. ZOOLOGY - VI SEMESTER** |  |
| **SEMESTER EXAMINATION: APRIL 2018** |  |
| **ZO 6115- Histology And Genetics** |  |
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| **Time - 2 1/2 hrs** |  |  **Max Marks - 70** |  |  |
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| **This paper contains 2 printed pages and three parts** |  |

**Note: Draw neat labelled diagrams wherever necessary**

**Indicate the question numbers clearly.**

**PART A**

**Answer the following: 1 X 15 =15**

1. Peritoneal lining of the alimentary canal is
2. Columnar epitheliumb. Cuboidal epithelium
3. Squamous epithelium d.Areolar connective tissue.
4. The outermost covering of the liver is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. Lobule b. Sinuses c. Glisson’s capsule d. Serosa
6. Adrenal cortex secretes
7. Glucocorticoids b. Mineralocorticoids c. Testosterone d. All the three
8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ muscles are found in tongue.
9. Smooth b. Skeletal c. Involuntary d. All the three.
10. Zymogen granules are found in the \_\_\_\_\_\_.
11. Hepatic cells b. Von Kupffer cells c. Acinar cells d. Intestinal cells
12. When 2 alleles of a single character is considered in a genetic concept they are said to be
13. Monohybrid b. Dihybrid c. Both d. None of the three
14. Walnut comb is a co dominant phenomenon. **TRUE/FALSE**.
15. In the blood group gene alleles IA , IB  and i; I represents \_\_\_\_\_\_\_\_\_\_\_\_\_.
16. In epistasis, when one gene suppresses another gene regarding a character, it is \_\_\_\_\_\_\_\_\_\_\_\_\_.
17. Haemophilia is due to defective factor VIII, which can be detected in foetuses of
18. 5 weeks b. 10 weeks c. 20 weeks d. 25 weeks
19. Single gene mutation may be
20. Autosomal b. Sex linked c. Recessive d. All
21. 5 – bromouracil is a base analogue of
22. Thymine b. Guanine c. Adenine d. Cytosine
23. Plasmid pBR-322 contains which one of the following gene/s?
24. Ampicillin resistance b. Tetracycline resistance c. Nitrogen fixation
25. Both A & B
26. Dosage compensation occurs in
27. Drosophila and mammals b. Mealy bug
28. Gryllus and Gryllotalpa d. All
29. The skin colour of man is an example for \_\_\_\_\_\_\_\_\_\_\_\_ inheritance.
30. Additive b. Qualitative c. Monohybrid d. Dihybrid

**PART B**

**Answer any FIVE of the following: 5 X 5 = 25**

1. In sweet peas, Gene C or P alone produces white flowers, purple being due to the presence of both the genes. What will be the offspring flower colour of the following cross: **CcPp X ccPp**.

Name the phenotypes of the parents and the genotypic ratio of the F1 offsprings.

1. What is eugenics? Enumerate any 5 positive eugenic methods.
2. What are the clinical & cytological features of Turner’s syndrome?
3. Note: In drosophila vestigial wings **‘v’** are recessive to normal wings **‘V’** and this gene is not in the sex chromosome. If a homozygous white eyed long winged female is crossed with a red eyed vestigial winged male, what will be the appearance of F1 and of F2, when F1 is self crossed?
4. a. Draw a neat labelled diagram of a taste bud.
5. Write short note different types of papillae.
6. What is Rh factor in Humans? Write a note on Erythroblastosis foetalis.
7. Illustrate the sex linked inheritance in man with respect to colour blindness character.

**PART C**

**Answer any THREE of the following: 10 X 3 = 30**

1. Describe the histological details of a hepatic lobule with special reference to the details of a hepatic cord.
2. With a neat labelled diagram, explain the cellular details of the glomerulus of a nephron.
3. Describe Phenylketonuria and Albinism.
4. What is linkage? Differentiate between complete linkage and incomplete linkage with examples.
5. Describe the process of production of human insulin by recombinant DNA technology.

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