

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

[MD 0723]

**JULY 2023
(MAY 2023 EXAM SESSION)**

Sub. Code: 2011

**M.D. DEGREE EXAMINATION
BRANCH III – PATHOLOGY
PAPER II – GENERAL PATHOLOGY
*Q.P. Code: 202011***

Time : 3 Hours

Maximum : 100 Marks

I. Essay: (2 x 15 = 30)

1. Role of stem cell in tissue repair. Complications of Haematopoietic Stem Cell Transplant.
2. Enumerate and explain in brief the cellular and molecular hallmark of cancer. Discuss in detail different ways of self sufficiency in growth signals in tumor cells.

II. Write short notes on: (10 x 5 = 50)

1. Natural killer cells.
2. Radiation injury.
3. Ehlers-Danlos syndrome.
4. Amniotic fluid embolism.
5. Adhesion molecules in inflammations.
6. Cellular aging.
7. Bioinformatics.
8. FISH.
9. Morphological changes in SLE.
10. Ubiquitin.

III. Reasoning Out: (4 x 5 = 20)

1. Young female aged 25 yrs, seeks medical attention with coldness and numbness of fingers, vertigo and dimness of vision. O/E: Radial pulse on both upper limbs very weak.
 - a) What is your diagnosis?
 - b) How will you establish your diagnosis?

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2. A 30 year old underwater construction workers, who on rapid ascent to the ambient pressure presented with edema, pulmonary hemorrhage focal atelectasis and excruciating joint pain and rashes.
 - a) What is your diagnosis?
 - b) What is the pathogenesis?

3. 12 year old boy with skin eczema, cerebral and G.I bleed and recurrent ear infections. Lab investigation : Peripheral smear shows anemia, eosinophilia and microthrombocytopenia. Patient has elevated levels of IgE and IgA with low levels of IgM and abnormal T cell function.
 - a) What is the diagnosis?
 - b) What is the pathogenesis of this disease?
 - c) What are the malignancies that these patients are prone to develop?

4. 39 year old woman is in her 17th week of gestation. A screening ultrasound revealed foetal anomalies. A therapeutic abortion was done. Foetal autopsy was done and gross examination of the foetus showed a foot length of 2.4cms which is consistent with 17 weeks. With the foetus having prominent occiput, low set ears, micrognathia, short neck, meckels diverticulum, horshoe kidney, complex cardiac defects and rocker bottom feet. Caudal end of spinal column showed a lumbosacral myelomeningocele.
 - a) What is the diagnosis?
 - b) What is the chromosomal abnormality and pattern of inheritance?

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