

VASCULAR SURGERY**PAPER-I**Time: 3 hours
Max. Marks: 100

VS/D/19/33/I

Important Instructions:

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

- a) Embryological developmental of the arterial system of the lower limbs. 7+3
 - b) Discuss about persistent sciatic artery.
- a) Ischemic reperfusion injury – mechanism & effects 5+5
 - b) Management of reperfusion injury in carotid artery revascularization.
- a) Hamburg classification of vascular malformation. 4+1+1+4
 - b) Indication of intervention in vascular malformation.
 - c) Methods of intervention in venous vascular malformation.
 - d) Discuss about sclerosing agents.
- Carbon dioxide angiography: indication, technique of CO₂ angiography, advantages, limitation and complication of this procedure. 2+2+2+2+2
- a) Graft infection. 4+(2+2+2)
 - b) Management of Graft infection pre-operatively, intraoperatively and postoperatively.
- a) Steal syndromes in vascular surgery. 4+6
 - b) Explain about subclavian steal syndrome.
- a) Pathological aspect of stable plaque and unstable plaque (vulnerable plaque). 4+3+3
 - b) Methods of stabilizing the unstable plaques.
 - c) Drugs used for stabilizing the vulnerable plaque.

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VASCULAR SURGERY

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8. a) Drugs used commonly in the treatment of arterial occlusion. 4+6
b) Discuss about all antiplatelet in brief.
9. a) Permanent and reversible effect of sympathectomy. 4+2+4
b) Indications of sympathectomy.
c) Indications of sympathectomy in TAO.
10. a) Takayasu's arteritis - diagnostic criteria. 3+3+2+2
b) Staging of Takayasu's arteritis.
c) Uses of PET scan in Takayasu's arteritis.
d) Treatment of Takayasu's arteritis.

PHARMACOLOGY**PAPER-I**Time: 3 hours
Max. Marks: 100

PHARM/D/19/34/I

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Write short notes on:

1. Discuss drug repurposing emphasizing its benefits. What might be the adverse consequences of ever greening of pharmaceutical patent? 7+3
2. Describe target concentration intervention (TCI) for optimization of drug treatment. How does it differ from TDM (Therapeutic Drug Monitoring)? 6+4
3. Explain how preparing own P-formulary can facilitate prescribing rationally? Write a short commentary on individualization of therapy as an indispensable step of rational use of medicine. 5+5
4. Explain how health technology assessment can help in rational use of drugs? What is its status in India? 6+4
5. What is medication error? How many types of error can you detect in a tertiary care hospital? Mention strategies to prevent these in busy clinical settings. 2+4+4
6. Briefly discuss about the pharmacological considerations on drug therapy in elderly individuals. Give examples and brief description of specific clinical tools (charts) which can aid in drug therapy in elderly patients. 7+3
7. Give your comments on importance and limitations of evidence based medicine in clinical practice. Enumerate by giving suitable examples with appropriate reasoning the rationality of various approved Fixed Dose Combinations. 4+6
8. How a nomogram can help in selection of appropriate dose of a drug? Explain with examples. What are the clinical implications of plasma protein binding of a drug? 5+2+3
9. Define Apparent Volume of Distribution of a drug. Discuss by giving suitable examples the various factors governing volume of distribution. 4+6
10. Define Drug - Drug Interaction. Enumerate various groups of drugs likely to be involved in drug interactions. Explain pharmacokinetic drug interactions by giving suitable examples. 3+2+5

PHYSICAL MEDICINE & REHABILITATION**PAPER-I**Time: 3 Hours
Max. Marks: 100

PMR/D/19/35/I

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Write short notes on:

1. How is Brachial plexus formed, draw a labeled diagram also. Write the presentation at common levels of injury to brachial plexus. 5+5
2. What are the indications and contraindications of heat therapy? What is the mode of action of action of Ultrasonography and Short Wave Diathermy? (3+3)+(2+2)
3. Biomechanics of knee joint. 10
4. Bronchopulmonary segments and principles of postural drainage of lungs. 10
5. What is HLA B27? What is its clinical significance? 5+5
6. Discuss determinants of human gait. How do they help optimize energy while walking? 6+4
7. What is Motor Unit Action Potential? What are the changes observed in nerve injury? 5+5
8. ASIA impairment scale. 10
9. Write the X-ray findings in different stages of ankylosing spondylitis. 10
10. Calcium and Vitamin D metabolism. 5+5

PHYSIOLOGY**PAPER-I**

Time: 3 Hours

Max. Marks: 100

PHY/D/19/36/I

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Write short notes on:

1. In the context of ventricular myocardial muscle: 5+5
 - a) State different phases of action potential and their ionic mechanism.
 - b) Define refractory period, its mechanism and importance.
2.
 - a) Describe different mechanisms by which cells internalize extracellular material. 6+4
 - b) Add a note on receptor mediated endocytosis.
3.
 - a) Explain the terms transcription and translation in gene expression. 3+7
 - b) Give detailed account of transcription factors in terms of types, function and regulation.
4.
 - a) Outline the distribution of water in different compartment of the body. 4+6
 - b) With help of an example, describe the method of estimation of volume of a body fluid compartment.
5.
 - a) Compare and contrast excitation contraction coupling in skeletal, cardiac and smooth muscle. 6+4
 - b) Explain the importance of latch phenomenon.
6.
 - a) Describe the general properties of G protein coupled receptors. 5+5
 - b) Outline the various secondary messengers associated with G protein coupled receptors.
7.
 - a) Compare and contrast innate immunity and adaptive immunity. 4+6
 - b) Describe the role of complement proteins in innate immunity.
8. Explain the role of various organ systems involved in regulation of: 5+5
 - a) Intravascular volume.
 - b) Osmolality of body fluids.
9. Outline the formation of different types of blood cells from a hematopoietic stem cell. Explain the concept of hematopoietic niche. 7+3
10. Formulate a plan for statistical analysis of quantitative data obtained from three separate groups of subjects (n=50) in a cross-sectional study design. 10

PLASTIC SURGERY**PAPER-I**Time: 3 hours
Max. Marks:100

PLS2/D/19/37/I

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Write short notes on:

1. Describe the blood supply of the skin. What do you understand by angiosomes? What is its clinical significance? 4+2+4
2. Describe healing of a 5x5cm wound in front of elbow if left to heal by itself? What measures can you take to prevent scar hypertrophy? 5+5
3. Classify nerve injuries. What is the role of Nerve Conduction Velocity (NCV) in management of nerve injuries? 3+7
4. What are high voltage electrical burns? Discuss its initial management. What is the role of fasciotomy/escharotomy in such cases? 3+3+4
5. How do you classify muscle flaps? Describe the anatomy of Latissimus dorsi flap. Discuss its uses in reconstructive surgery. 3+3+4
6. Enumerate the muscles supplied by the radial nerve. How will you treat a patient with post injection radial nerve palsy? 3+7
7. Describe the anatomy of temporo-parietal fascia. What are its uses? 4+6
8. What is Osteo-integration? What are the principles of Osteo-integration? Discuss its clinical applications in relation to Plastic Surgery. 2+2+6
9. a) Outline various methods for assessing patency of free flaps. 5+5
b) What is super microsurgery? Discuss the clinical uses of super microsurgery.
10. What is the difference between disinfection and sterilization? What are the markers/ indicators of sterilization? 4+6
