CBSE | DEPARTMENT OF SKILL EDUCATION

MEDICAL DIAGNOSTICS (SUBJECT CODE - 828)

Blue-print for Sample Question Paper for Class XII (Session 2024-2025)

Max. Time: 3 Hours **Max. Marks: 60**

PART A - EMPLOYABILITY SKILLS (10 MARKS):

UNIT NO.	NAME OF THE UNIT	OBJECTIVE TYPE QUESTIONS	SHORT ANSWER TYPE QUESTIONS	TOTAL QUESTIONS
		1 MARK EACH	2 MARKS EACH	
1	Communication Skills - IV	1	1	2
2	Self-Management Skills - IV	1	1	2
3	Information and Communication Technology Skills - IV	2	1	2
4	Entrepreneurial Skills - IV	1	1	2
5	Green Skills - IV	1	1	2
TOTAL QUESTIONS		**6**	**5**	**11**
NO. OF QUESTIONS TO BE ANSWERED		**Any 4**	**Any 3**	**07**
TOTAL MARKS		**1 x 4 = 4**	**2 x 3 = 6**	**10 MARKS**

PART B - SUBJECT SPECIFIC SKILLS (50 MARKS):

UNIT NO.	NAME OF THE UNIT	OBJECTIVE TYPE QUESTIONS	SHORT ANS.TYPE QUES.-I	SHORT ANS.TYPE QUES.- II	DESCRIPTIVE/LONG ANS. TYPE QUESTIONS	TOTAL QUESTIONS
		1 MARK EACH	2 MARKS EACH	3 MARKS EACH	4 MARKS EACH	
1	Hematology Lab	11	2	1	1	15
2	Blood Bank and Transfusion	10	2	1	2	15
3	Cytopathology	11	1	1	2	15
TOTAL QUESTIONS		**32**	**5**	**3**	**5**	**45**
NO. OF QUESTIONS TO BE ANSWERED		**26**	**Any 3**	**Any 2**	**Any 3**	**34**
TOTAL MARKS		**1 x 26= 26**	**2 x 3 = 6**	**3 x 2 = 6**	**4 x 3 = 12**	**50 MARKS**

MEDICAL DIAGNOSTICS (SUBJECT CODE - 828)

SAMPLE PAPER FOR CLASS XII (SESSION 2024-2025)

Max. Time: 3 Hours **Max. Marks: 60**

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of **24 questions** in two sections – Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. **Out of the given (6 + 18 =) 24 questions, a candidate has to answer (6 + 11 =) 17 questions in the allotted (maximum) time of 3 hours.**
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (30 MARKS):**
   - **i.** This section has 06 questions.
   - **ii.** There is no negative marking.
   - **iii.** Do as per the instructions given.
   - **iv.** Marks allotted are mentioned against each question/part.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (30 MARKS):**
   - **i.** This section contains 18 questions.
   - **ii.** A candidate has to do 11 questions.
   - **iii.** Do as per the instructions given.
   - **iv.** Marks allotted are mentioned against each question/part.

SECTION A: OBJECTIVE TYPE QUESTIONS

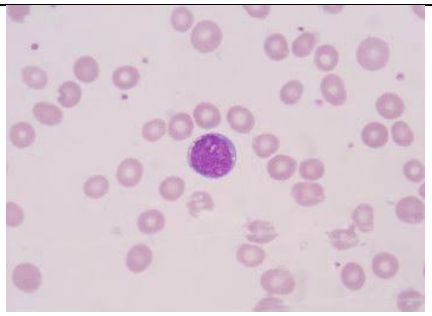
Q. No.	QUESTION	Marks
Q. 1	**Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)**	
i.	_____ is not a stage of active listening a) Remembering b) Responding c) Respecting d) Receiving	**1**
ii.	What does S signify in SMART?	**1**
iii.	What is the format of writing any function?	**1**
iv.	Define creativity.	**1**
v.	Which of the following is an example of electric vehicle technologies hybridized with fossil fuel engines (a) Battery cars (b) Automatic vehicles (c) PHEVs(Plug-in Hybrid Electric Vehicles) (d) EEVs (Energy Efficiency Vehicles)	**1**
vi.	_____ is used to find the average of numbers in a range of cell.	**1**
Q. 2	**Answer any 5 out of the given 7 questions (1 x 5 = 5 marks)**	
i.	Write down the full form of CBC. a) Common blood count b) Complete blood count c) Complete bone count d) Cytopatholgical blood count	**1**
ii.	Name the anticoagulant that is best to use for coagulation studies.	**1**
iii.	What do you mean by MCHC?	**1**
iv.	The purpose of using Glycerin for observing blood smear is- a) Inhibting growth of micro organisms b) To make RBC settle on surface of counting chamber c) To inhibit rouleaux formation d) To stain nuclei of leukocytes.	**1**

v.	In which condition decreased osmotic fragility is seen? a) Congenital spherocytosis b) Thalassemia c) Autoimmune disorders d) Cushing's disease	**1**
vi.	Write down the full form of PCV.	**1**
vii.	Name the instrument to separate solution into sediment and supernatant by using required speed.	**1**
Q. 3	**Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)**	
i.	Name one commonly used method to measure ESR. a) Benedict's test method b) Fehling's test method c) Westergren's Method. d) Romanowsky Method	**1**
ii.	Reference range for calculating RBC count in females is - a) 3.8-4.8 millions/cumm b) 4.5-5.5 millions/cumm c) 2.8-3.8 millions/cumm d) 4.8-5.8 millions/cumm	**1**
iii.	Which RBC diluting fluid is used if one wants to prevent rouleaux formation?	**1**
iv.	What do you mean by Hematopoiesis? a) An increase in platelet count b) Production of blood cells c) An increase in WBC count d) An increase in RBC count	**1**
v.	Who discovered Rhesus blood group system?	**1**
vi.	The titer of an antibody is usually determined by testing two fold serial dilution of the serum against selected _____cells.	**1**
vii.	Rh antibody titres are done in the antenatal period - a) Rh positive mother with Rh positive foetus may get alloimmunised with anti D and cause hemolytic disease b) Rh positive mother with Rh negative foetus may get alloimmunised with anti D and cause hemolytic disease c) Rh negative mother with Rh negative foetus may get alloimmunised with anti D and cause hemolytic disease d) Rh negative mother with Rh positive foetus may get alloimmunized with anti D and cause hemolytic disease	**1**
Q. 4	**Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**	
i.	_____is defined as clumping of particles that have antigen on their surface and is brought about by anti-bodies. a) Agglutination b) Hemolysis c) Reaction d) Blood clot	**1**
ii.	Which is the largest component of Biomedical Waste generated- a) Radioactive waste b) Hazardous waste c) Non hazardous waste d) Infectious waste.	**1**
iii.	_____are serum proteins, more specifically immunoglobulins. a) Antigens b) Antibodies c) Pathogen d) Haemocytes	**1**

iv.	Romit has a platelet count of 104,000/microliter in his blood. He is suffering from condition called-	**1**
v.	What are the antigens of the Lutheran system? a) Lu m and Lu n b) Lu c and Lu d c) Lu a and Lu b d) Lu u and Lu v	**1**
vi.	The two types of processes which can be done using a cell separator are- a) Continuous and discontinuous flow processes b) Continuous and interrupted flow processes c) Controlled and uncontrolled flow processes d) Balanced and unbalanced flow processes.	**1**
Q. 5	**Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**	
i.	What is the basic function of autoclave in laboratory?	**1**
ii.	Exfoliative cytology does not deal with study of cells from a) Epithelial and Mesothelial lining b) Body fluids c) Tissue fragments extracted from lesions d) Bronchial washings and buccal smear	**1**
iii.	Name one special purpose fixative used in a cytology laboratory. a) AAF fixative b) Carnoy's fixative c) Formalin d) Giemsa stains	**1**
iv.	The preferred test for detecting cervical cancer is- a) RT PCR b) ELISA c) PAP Smear d) WIDAL Test	**1**
v.	Name the chemical which is used for dehydration process.	**1**
vi.	What do you mean by Cytology?	**1**
Q. 6	**Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**	
i.	Write down full form of FNAC. a) Fine needle aspiration cytology b) Free needle aspiration cytology c) Fine needle activation cytology d) Free needle activation cytology	**1**
ii.	_____is used strictly for taking materials from endocervix. a) Endo-cervical brush b) Exo-cervical brush c) Endo-cellular brush d) Extracellular brush	**1**
iii.	It is important that no air-drying occurs prior to_____-. a) Fixation b) Dehydration c) Clearing d) sterilizing	**1**

iv.	 Identify the given instrument- a) Cryopreservative bath b) Plasma thawing bath c) Cytospin d) Platelet agitator	**1**
v.	Name one routine fixative that was originally recommended by Papanicolaou.	**1**
vi.	Cell blocks are made from a) all fluid aspirates b) all epithelial tissues c) tissue from lumps and lesions d) reticulocyte cells	**1**

SECTION B: SUBJECTIVE TYPE QUESTIONS

Q. No.	QUESTION	Marks
Answer any 3 out of the given 5 questions on Employability Skills in 20 – 30 words each (2 x 3 = 6 marks)		
Q. 7	Describe any 2 steps of active listening?	**2**
Q. 8	Give any two of Big Five factors of personality.	**2**
Q. 9	Entrepreneurship is considered to be both an art and a science. Why?	**2**
Q. 10	Mention any two ways of minimizing waste and pollution.	**2**
Q. 11	Differentiate between a worksheet and a workbook.	**2**
Answer any 3 out of the given 5 questions in 20 – 30 words each (2 x 3 = 6 marks)		
Q. 12	Write down the advantages of Evacuated Tube System.	**2**
Q. 13	Give the principle of Sahli's method used for haemoglobin estimation.	**2**
Q. 14	Write down the importance of blood storage cabinets.	**2**
Q. 15	Explain two types of materials used to detect respiratory tract malignancies.	**2**
Q. 16	 **Differential** leukocyte count is done to estimate the percentage of different types of WBC's in blood. What are the various sources of error while performing a differential count.	**2**
Answer any 2 out of the given 3 questions in 30– 50 words each (3 x 2 = 6 marks)		
Q. 17	Enumerate three stages of the ESR experiment.	**3**
Q. 18	What are the different types of blood collection bags used in blood banks? Describe the role of tube sealer while collecting blood in bags.	**3**
Q. 19	Enlist the indications of FNAC. Outline its methodology.	**3**
Answer any 3 out of the given 5 questions in 50– 80 words each (4 x 3 = 12 marks)		
Q. 20	How can the microscope be handled properly in the laboratory?	**4**
Q. 21	How can the bleeding time be measured by IVY method?	**4**
Q. 22	Reema is working in the cytology laboratory of a reputed hospital. What kind of safety rules shall be followed by her in the laboratory?	**4**
Q. 23	Describe in detail any four sampling devices used by professional medical personnel for preparation of FGT smear.	**4**
Q. 24	Enumerate the functions of four special purpose fixatives	**4**