

# CBSE DEPARTMENT OF SKILL EDUCATION

## MEDICAL DIAGNOSTICS (SUBJECT CODE 828)

CLASS XII (SESSION 2021-2022)  
BLUE-PRINT FOR SAMPLE QUESTION PAPER FOR TERM - II

Max. Time Allowed: 1½ Hours (90 min)

Max. Marks: 30

### PART A - EMPLOYABILITY SKILLS (05 MARKS):

UNIT NO.	NAME OF THE UNIT	NO. OF QUESTIONS - VSA (1 MARK EACH)	NO. OF QUESTIONS - SA (2 MARKS EACH)	NO. OF QUESTIONS - LA (4 MARKS EACH)	TOTAL NUMBER OF QUESTIONS
4	Entrepreneurial Skills-IV	2	1	-	3
5	Green Skills-IV	2	1	-	3
<b>TOTAL QUESTIONS</b>		<b>4</b>	<b>2</b>	<b>-</b>	<b>06</b>
<b>NO. OF QUESTIONS TO BE ANSWERED</b>		<b>Any 3</b>	<b>Any 1</b>	<b>-</b>	<b>04</b>
<b>TOTAL MARKS</b>		<b>3 x 1 = 3 Marks</b>	<b>1 x 2 = 2 Marks</b>	<b>-</b>	<b>05 Marks</b>

### PART B - SUBJECT SPECIFIC SKILLS (25 MARKS):

UNIT NO.	NAME OF THE UNIT	NO. OF QUESTIONS - VSA (1 MARK EACH)	NO. OF QUESTIONS - SA - I (2 MARKS EACH)	NO. OF QUESTIONS - SA - II (3 MARKS EACH)	NO. OF QUESTIONS - LA (4 MARKS EACH)	TOTAL NUMBER OF QUESTIONS
2	Blood Bank and Transfusion	4	2	2	2	10
3	Cytopathology	3	3	2	1	9
<b>TOTAL QUESTIONS</b>		<b>07</b>	<b>05</b>	<b>04</b>	<b>03</b>	<b>19</b>
<b>NO. OF QUESTIONS TO BE ANSWERED</b>		<b>05</b>	<b>03</b>	<b>02</b>	<b>02</b>	<b>12</b>
<b>TOTAL MARKS</b>		<b>5 x 1 = 05 Marks</b>	<b>3 x 2 = 06 Marks</b>	<b>2 x 3 = 06 Marks</b>	<b>2 x 4 = 08 Marks</b>	<b>25 Marks</b>
<b>TOTAL MARKS</b>		<b>05 (Part A) + 25 (Part B) = 30 MARKS</b>				

# CBSE | DEPARTMENT OF SKILL EDUCATION

## Medical Diagnostics (SUBJECT CODE 828)

CLASS XII (SESSION 2021-2022)  
SAMPLE QUESTION PAPER FOR TERM - II

Max. Time Allowed: 1 ½ Hours (90 min)

Max. Marks: 30

### General Instructions:

1. Please read the instructions carefully
2. This Question Paper is divided into 03 sections, viz., Section A, Section B and Section C.
3. Section A is of 05 marks and has 06 questions on Employability Skills.
  - a) Questions numbers 1 to 4 are one mark questions. Attempt any three questions.
  - b) Questions numbers 05 and 06 are two marks questions. Attempt any one question.
4. Section B is of 17 marks and has 16 questions on Subject specific Skills.
  - a) Questions numbers 7 to 13 are one mark questions. Attempt any five questions.
  - b) Questions numbers 14 to 18 are two marks questions. Attempt any three questions.
5. Section C is of 08 marks and has 03 competency-based questions.
  - a) Questions numbers 19 to 21 are four marks questions. Attempt any two questions.
6. Do as per the instructions given in the respective sections.
7. Marks allotted are mentioned against each section/question.

### SECTION A

(3 + 2 = 5 marks)

<b>Answer any 03 questions out of the given 04 questions</b>		<b>1 x 3 = 3</b>
<b>Q.1</b>	Jyoti wants to be entrepreneur, but she has one specific problem by which she is not able to be successful. What is this barrier?	<b>1</b>
<b>Q.2</b>	_____ is defined as the drive required to engage in goal -oriented behavior.	<b>1</b>
<b>Q.3</b>	They manage terrace top gardens to grow fruits and vegetables in urban areas. They use environment friendly ways to grow fruits and vegetables. What are these people called as?	<b>1</b>
<b>Q.4</b>	UNEP stands for _____	<b>1</b>
<b>Answer any 01 question out of the given 02 questions</b>		<b>1 x 2 = 2</b>
<b>Q.5</b>	Why 'persistence' and commitment' considered as competencies for an entrepreneur?	<b>2</b>
<b>Q.6</b>	Abhijit is working as Green design Professionals. What role does he play to protect environment?	<b>2</b>

**SECTION B****(5 + 6 + 6 = 17 marks)**

<b>Answer any 05 questions out of the given 07 questions</b>		<b>1 x 5 = 5</b>
<b>Q.7</b>	In blood bank the register is used where serial number, date and time of issue, bag serial number, ABO, Rh, total quantity in ml, name and address of the recipient, group of recipient, unit/institution, details of crossmatching report, indication for transfusion, components issued, quantity issued, signature of the issuing person are mentioned in proper way. Which kind of register is this?	<b>1</b>
<b>Q.8</b>	Genetics is the study of inheritance – the transmission of characteristics from parents to offspring. In 1865, the scientist did some experiments with garden peas thereby bringing to light the science of genetics. His studies led to the basic understanding of how genetic traits are passed to each generation. Name the scientist.	<b>1</b>
<b>Q.9</b>	It is any substance, either protein or non-protein but when introduced into an animal causes the production of another specific substance called antibody. The antibody reacts specifically with the substance. Identify the substance.	<b>1</b>
<b>Q.10</b>	The system contains two antigens Fya and Fyb. Plasmodium vivax infection does not affect red cells lacking Fya and Fyb. Which blood group system is this?	<b>1</b>
<b>Q.11</b>	The ideal fixative recommended in most of the laboratories for cytological specimens. It produces optimal nuclear details but some amount of cell shrinkage. Absolute (100%) ethanol produces a similar effect on cells. But is much more expensive. Identify the Routine fixative.	<b>1</b>
<b>Q.12</b>	_____ is used for CSF, small volume of fluid samples and occasionally for larger volumes for diagnosis purpose in cytology laboratory.	<b>1</b>
<b>Q.13</b>	The lump is immobilized with the left hand in a position favorable for needle aspiration and holding the syringe by the barrel in the right hand; the needle is pushed into predetermined site of the lump until needle tip penetrates the center of the lump. Identify the procedure.	<b>1</b>
<b>Answer any 03 questions out of the given 05 questions</b>		<b>2 x 3 = 6</b>
<b>Q.14</b>	During agglutination reaction why is it important to wash the cells?	<b>2</b>
<b>Q.15</b>	Blood grouping is very important procedure in medical field. Why is it important.	<b>2</b>
<b>Q.16</b>	How the FNAC process can play important role in diagnostic purpose?	<b>2</b>
<b>Q.17</b>	How the endometria aspiration smear can be made?	<b>2</b>
<b>Q.18</b>	As a laboratory technician how can you deal with the hemorrhagic fluids in cytopathology laboratory?	<b>2</b>
<b>Answer any 02 questions out of the given 04 questions</b>		<b>3 x 2 = 6</b>
<b>Q.19</b>	During antigen-antibody interaction, which factors are depending on reaction condition and how?	<b>3</b>
<b>Q.20</b>	How does Rhesus blood group system play important role in medical field? Why is it important to measure Rh antibody titers?	<b>3</b>
<b>Q.21</b>	In human body what are the common sites for Exfoliative cytology?	<b>3</b>
<b>Q.22</b>	What do you mean by cytological fixatives and mention the properties of good cytological fixative.	<b>3</b>

**SECTION C**  
**(COMPETENCY BASED QUESTIONS)**

**(2 x 4 = 8 marks)**

**Answer any 02 questions out of the given 03 questions**

<b>Q.23</b>	<p>The presence of antibody in serum is not always because of exposure to antigenic stimulus by red cells. Some foreign substances like bacteria and plants (containing red cell like substances) can cause antibody production and these antibodies are called naturally occurring antibodies. These are commonly of IgM type, occur in serum without any specific antigenic stimulus, e.g., anti-A, anti-B, and anti- Wra. These antibodies are present in individuals who lack that antigen. Immune antibodies are IgG. They develop due to immunization following pregnancy, previous transfusion, or deliberate injection of immunogenic material. In some instances, immunogenic event is unknown.</p> <p>The antigen-antibody reactions In-vitro</p> <ol style="list-style-type: none"> <li>1. Agglutination</li> <li>2. Hemolysis</li> <li>3. Precipitation</li> <li>4. Enzyme linked immunosorbent assay (ELISA)</li> </ol> <p>(a) If you have to detect any patient is suffering from HIV or not, which procedure of Ag-Ab reaction will be followed among above and how?</p> <p>(b) What is the difference between Agglutination and Hemolysis?</p>	<b>4</b>
<b>Q.24</b>	<p>A B antigens are inherited as codominant fashion. Everyone inherits two ABO genes from each parent and they determine the ABO antigen present on their red cells. O is an amorph and does not produce A or B substance. The serological typing reveals the phenotype, and the family studies help to reveal the genotype.</p> <p>The A,B antigens are glycoproteins. Each molecule of a precursor is made up of a peptide and a sugar. The blood group specificity is determined by the terminal sugar.</p> <p>In 1952 Bhende, Bhatia and Deshpande identified a new blood group called Bombay group. The red cells appear to be group O, but their serum contains a powerful antibody reacting with all other red cells except those of the same group. The cells do not contain H antigen.</p> <p>Describe the role of (a) Transferases and (b) Secretor states in the biochemistry of ABO system.</p>	<b>4</b>
<b>Q.25</b>	<p>The cytological specimens collected from FGT include cervical smear, vaginal smear, aspiration from posterior fornix of vagina (vaginal pool smear) and endometrial smear.</p> <p>Cervical smear: Cancer of the uterine cervix is the commonest cancer in the FGT. Almost all invasive cancers of the cervix are preceded by a phase of preinvasive disease, which demonstrates microscopically a continuing spectrum of events progressing from cervical intraepithelial neoplasia (CIN) grade I to III including carcinoma in-situ before progressing to squamous cell carcinoma. This progressive course takes about 10 to 20 years. Early detection even at the preinvasive stage is possible by doing cervical smear (Pap Smear Test). This can identify patients who are likely to develop cancer and appropriate interventions may be carried out.</p> <p>(a) What are the advantages of Pap Smear?</p> <p>(b) How the Endo-cervical brush can be used to obtain the sample?</p>	<b>4</b>