

MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER M.Sc. MEDICAL (ANATOMY, PHYSIOLOGY, BIOCHEMISTRY, PHARMACOLOGY, MICROBIOLOGY) DEGREE EXAMINATION – OCTOBER 2020

SUBJECT: INTRODUCTION TO RESEARCH – COMMON CORE (MCC 602)

Monday, October 19, 2020

Time: 14:00 – 16:30 Hrs.

Maximum Marks: 50

✍ **Answer ALL the questions.**

✍ **Long answer questions:**

1. What are the different types of research? Discuss the steps involved in research process. (10 marks)

2A. Write an explanatory note on sampling distribution with example.

2B. If Z is normally distributed with $\mu = 0$ and $\sigma = 1$. Find the following probabilities:

i) $P(Z \leq 2)$ ii) $P(-1 \leq Z \leq 2)$ iii) $P(Z \geq 3)$

(10 marks)

3. **Short Answer Questions:**

3A. Calculate the variance from the following distribution of marks obtained by students.

Marks	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of Students	2	3	12	23	7	2	1

3B. What is Non-probability sampling? Explain quota sampling with its advantages and disadvantages.

3C. From the following data, use X^2 -test and conclude whether inoculation is effective in preventing tuberculosis:

Group	Attacked	Not Attacked	Total
Inoculated	20	90	110
Not inoculated	36	74	110
Total	56	164	220

(Given, $X^2_{0.05,1} = 3.84$)

3D. Explain case-control study design, its advantages and disadvantages with an example.

3E. Define following terms:

- i) Sensitivity ii) Specificity iii) Positive predictive value
iv) Negative predictive value.

3F. Describe any five salient statements of Nuremberg code.

(5 marks \times 6 = 30 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION**SECOND SEMESTER M.Sc. (MEDICAL ANATOMY)
DEGREE EXAMINATION – OCTOBER 2020****SUBJECT: THORAX, ABDOMEN AND PELVIS - 1 (MAN 604)**

Tuesday, October 20, 2020

Time: 14:00 – 16:30 Hrs.

Maximum Marks: 50

- ✍ All questions are compulsory. Write brief, clear, relevant and legible answers.
✍ Illustrate your answers with diagrams and flow charts wherever appropriate.

1. Describe the interior of right ventricle. Add a note on the conducting system of the heart.
(7+3 = 10 marks)

2. Describe the uterus under following headings:

2A. Position and parts

2B. Peritoneal relations

2C. Supports

2D. Blood supply

(2+2+4+2 = 10 marks)

3. **Write short notes:**

3A. Azygos vein

3B. Left bronchus

3C. Pulmonary ligament

3D. Superior mesenteric vessels

3E. Peritoneal folds attached to stomach

3F. Perineal body

(5 marks × 6 = 30 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER M.Sc. (MEDICAL ANATOMY)

DEGREE EXAMINATION – OCTOBER 2020

SUBJECT: THORAX, ABDOMEN AND PELVIS - 2 (MAN 606)

Wednesday, October 21, 2020

Time: 14:00 – 16:30 Hrs.

Maximum Marks: 50

- ✍ **All questions are compulsory. Write brief, clear, relevant and legible answers.**
- ✍ **Illustrate your answers with diagrams and flow-charts wherever appropriate.**

1. Describe the differences between the microscopic structures of conducting and respiratory portions of the lung
(10 marks)
2. Describe the midgut rotation and its anomalies
(10 marks)
3. **Write short notes on:**
 - 3A. Fetal circulation
 - 3B. Development of pancreatic duct and anomalies
 - 3C. Formation and fate of mesonephric duct
 - 3D. Microscopic feature of graafian follicle
 - 3E. Imaging techniques to visualize the urogenital system
 - 3F. Intestinal cells

(5 marks × 6 = 30 marks)

