Question Paper

MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION - MAY/JUNE 2019
SUBJECT: BCVT 202 - CARDIAC PACEMAKERS AND DEFIBRILLATORS
(2016 SCHEME)
Saturday, June 08, 2019 (14.00 - 16.00)

Marks: 50   **Duration: 120 mins.**

Answer all the questions.

1)	Explain the factors affecting loss of capture and loss of sensing in pacemaker function.	(10)
2)	Discuss the different pacing modes in permanent pacemaker implantation.	(10)
3A)	Describe pacemaker syndrome and pacemaker mediated tachycardia.	(5)
3B)	Discuss the programming therapy for ventricular tachycardia.	(5)
3C)	Write the AHA guidelines for temporary pacemaker implantation.	(5)
3D)	Discuss the chronic complications of permanent pacemaker implantation.	(5)
4A)	Define under sensing.	(2)
4B)	What are passive fixation leads?	(2)
4C)	Write the nomenclature of DDD pacemaker.	(2)
4D)	Define myocardial stimulation.	(2)
4E)	Define impedance in pacing.	(2)

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FOURTH SEMESTER B.Sc. CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION - MAY/JUNE 2019
SUBJECT: BCVT 204 - CONGENITAL HEART DISEASE - I
(2016 SCHEME)
Tuesday, June 11, 2019 (14.00 - 17.00)

Marks: 100   **Duration: 180 mins.**

Answer all the questions.
Draw the diagram wherever necessary.

1A)	Explain embryology, classification, clinical finding, ECG, X-ray and Echocardiographic diagnosis of Ebstein's anomaly.	(20)
1B)	Explain Embryology, clinical presentation, classification and diagnosis of Endocardial cushion defect.	(20)
2A)	Explain classification, ECG, X-ray, Echo findings of TAPVC.	(10)
2B)	Describe anatomical classification, pathophysiology and diagnosis of coarctation of aorta.	(10)
3A)	Explain the Echo findings of different types of AP window.	(5)
3B)	Explain pathophysiology and echocardiographic evaluation of ASD.	(5)
3C)	Describe pathophysiology, ECG, and X-Ray in VSD.	(5)
3D)	Explain clinical presentation in obstructive TAPVC.	(5)
3E)	Describe pathophysiology and clinical findings in Supra Valvular mitral ring.	(5)
3F)	Describe classification and clinical finding in PDA.	(5)
4A)	Define parachute mitral valve.	(2)
4B)	Define Gerbode's defect.	(2)
4C)	Describe ECG and X-ray in AP window.	(2)
4D)	Enumerate the cardiac malformation associated with right isomerism.	(2)
4E)	Define cortriatiatum dexter.	(2)

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FOURTH SEMESTER BPT/ B.Sc. C.V.T./ B.Sc. R.T./ B.Sc. M.I.T./ B.Sc. RRT&DT / BOPT / B.O.T./ B.Sc. P.F.T. DEGREE EXAMINATION - MAY/JUNE 2019
SUBJECT : PHARMACOLOGY (PHAR 202)
(2016 SCHEME)
Tuesday, May 28, 2019 (14.00 - 16.00)

Marks: 50   **Duration: 120 mins.**

Answer all the questions.

1A)	List two classes of skeletal muscle relaxants with an example for each.	(2)
1B)	List two opioids and mention their two uses.	(2)
1C)	List two inhalational and two intravenous general anesthetics.	(2)
1D)	List two uses and two adverse effects of corticosteroids.	(2)
1E)	List two oral antidiabetic drugs and mention two adverse effects of insulin.	(2)
2A)	List four anti-tubercular drugs.	(2)
2B)	**Define the following with one example:** i) Teratogenicity ii) Local anesthetics iii) Chemoprophylaxis iv) First pass metabolism	(8)
3A)	Explain the mechanism of action of paracetamol and list its two uses. Mention two differences between aspirin and paracetamol.	(5)
3B)	List three classes of drugs with an example for each used in peptic ulcer. Explain the mechanism of action of any one class.	(5)
3C)	List two advantages and two disadvantages each of sublingual and intravenous routes of drug administration. Mention one drug each administered by sublingual and intravenous routes.	(5)
3D)	Mention two anticoagulants and explain the mechanism of action of any one of them. List two uses and two adverse effects of anticoagulants.	(5)

4) Give two examples and two uses for the following class of drugs:

4A)	Beta blockers	(2)
4B)	Antihistaminics	(2)
4C)	Beta lactam antibiotics	(2)
4D)	Benzodiazepines	(2)
4E)	ACE inhibitors	(2)

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FOURTH SEMESTER B.Sc. C.V.T./ B.Sc. R.T./ B.Sc. M.I.T./ B.Sc. RRT&DT / BOPT / B.O.T. / B.Sc. H.I.M. / B.Sc. E.S.S. AND SECOND SEMESTER B.Sc. M.R.T. DEGREE EXAMINATION - MAY/JUNE 2019
SUBJECT : GENERAL PSYCHOLOGY/ PSYCHOLOGY (PSYC 202)
(2016/2016 RV SCHEME)
Friday, May 31, 2019 (14.00 - 16.00)

Answer ALL questions.

Marks: 50   **Duration: 120 mins.**

Write essays on:

1)	Explain Classical conditioning along with it's applications.	(10)
2)	Elaborate on any two theories of motivation.	(10)

3) Write short notes on:

3A)	Perceptual organization	(5)
3B)	Heuristics	(5)
3C)	Defence mechanisms	(5)
3D)	Types of conflicts	(5)

4) Write very short answers on:

4A)	Introspection	(2)
4B)	Shaping	(2)
4C)	Frustration	(2)
4D)	IQ	(2)
4E)	Fine motor skills	(2)

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Question Paper

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SECOND SEMESTER BASLP & FOURTH SEMESTER B.Sc. C.V.T./ B.Sc. P.F.T./B.Sc. H.I.M. DEGREE EXAMINATION - MAY/JUNE 2019
SUBJECT : RESEARCH METHODS & STATISTICS / BASIC BIOSTATISTICS & RESEARCH METHODOLOGY/ BIOSTATISTICS & RESEARCH METHODOLOGY/ BIOSTATISTICS
(STAT 402 - 2017 / 2016 SCHEME)
Tuesday, June 04, 2019 (14.00 - 17.00)

Marks: 100   **Duration: 180 mins.**

Answer the following question:

1)   Describe qualitative variables with examples.   (5)

2) **Differentiate between the following:**

2A)   Basic research vs applied research   (4)

2B)   Probability sampling vs non-probability sampling   (4)

3) **Briefly explain the following:**

3A)   Ratio scale and interval scale   (4)

3B)   Snowball sampling   (4)

3C)   Simple random sampling   (4)

Answer all the questions.

4)   Outline the structure of a research protocol.   (5)

5)   A sample of 100 university students was asked to state in what way they preferred to spend their   (10)
                Saturday evening. The responses obtained are as follows:

PREFERRED LIESURE	NUMBER OF STUDENTS
Cinema	31
Musical concert	23
Watching TV	19
Movie Theatre	5
Restaurant	20
Studying	2

Represent the above data with a
a) Bar diagram
b) Pie diagram
(5+5 = 10 marks)

6) The following are the arterial activated partial thromboplastin time values recorded from a group of 10 patients.
20.7   23.2   29.6   34.4   56.2   30.1   21.3   26.5   21.8   35.2
Obtain the values of :

6A)   Median   (3)

6B)   Interquartile range   (7)

7) The following data provides haemoglobin level (gm/dL) of 12 subjects.
12   15   13   12   17   10   11   14   13   17   13   15
Calculate the values of

7A)   Sample mean   (3)

7B)   Mode   (1)

7C)   Range   (1)

8) It was observed that the incubation period in days of patients with infectious hepatitis follows normal distribution with a mean of 19 days and standard deviation of 5 days. What percentage of the patients have incubation period

8A)   Below 4 days   (2)

8B)   Between 24 and 34 days   (2)

8C)   In the reference range   (2)

9)   Describe the types of correlation with the help of scatter diagram.   (9)

10)   Give the assumptions of simple linear regression. What information is contained in the coefficient of determination?   (6)

11A)   Define Period prevalence rate   (2)

11B)   Define Neonatal mortality rate   (2)

11C)   Define Net reproduction rate   (2)

12)   Explain the phases of demographic cycle.   (8)

13)   State the aims of epidemiology. Discuss the usefulness and limitations of cross sectional studies.   (10)

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