



JOINT ACADEMIC PROGRAMME ON "BIOMEDICAL INSTRUMENTATION" (BMI)

University of Calcutta and The West Bengal University of Health Sciences

Website(s): www.japbmi.in, www.caluniv.ac.in, www.wbuhs.ac.in, www.wbhealth.gov.in

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M.Sc. 1st SEMESTER EXAMINATION

PAPER	PAPER CONTENT
THEORETICAL PAPERS [TOTAL 150 MARKS]	
1	BASIC ANALOG ELECTRONICS, DIGITAL ELECTRONICS AND MICROPROCESSORS [50 MARKS]
2	BASIC THEORY OF MEASUREMENT, ELECTRICAL AND ELECTRONICS MEASUREMENTS [50 MARKS]
3	HUMAN ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY, MEDICAL PHYSICS AND BIOMATHEMATICS [50 MARKS]
PRACTICAL PAPERS [TOTAL 100 MARKS]	
1	MEASURING INSTRUMENTS ANALOG AND DIGITAL, ELECTRONICS AND MICROPROCESSORS [50 MARKS]
2	MEASUREMENTS, SENSORS AND TRANSDUCERS, SIGNAL ANALYSIS AND ELECTRICAL AND ELECTRONICS MEASUREMENTS [50 MARKS]

M.Sc. 2nd SEMESTER EXAMINATION

PAPER	PAPER CONTENT
THEORETICAL PAPERS [TOTAL 150 MARKS]	
4	OT, ICU AND ITU EQUIPMENTS [50 MARKS]
5	MEDICAL IMAGING, RADIOLOGY AND ICP MONITORS [50 MARKS]
6	BIOMATERIALS, RADIOISOTOPES AND NUCLEAR MEDICINE [50 MARKS]
PRACTICAL PAPERS [TOTAL 100 MARKS]	
3	MEDICAL LABORATORY EQUIPMENTS, CALIBRATION AND SAFETY CHECKING OF MEDICAL EQUIPMENTS [50 MARKS]
4	OPERATION, TROUBLESHOOTING AND CALIBRATION OF UNKNOWN CIRCUITS RELATED TO MEDICAL EQUIPMENTS [50 MARKS]



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PAPER	PAPER CONTENT
THEORETICAL PAPERS [TOTAL 150 MARKS]	
7	VENTILATOR, HUMIDIFIER, NEBULIZER, ASPIRATOR AND DEFIBRILATOR, MYOCARDIAL PROTECTION, CEREBRAL PERFUSION, MICRO EMBOLI & ETC [50 MARKS]
8	OPTICAL TRANSMISSION, OPTO-ELECTRONICS, FIBRE-OPTICS AND LASERS, MICROPROCESSOR IN BIOMEDICAL INSTRUMENTS [50 MARKS]
9	ANALYTICAL INSTRUMENTS AND ITS MEDICAL APPLICATIONS, MEDICAL BIOPHYSICS AND INFORMATICS, CLINICAL LABORATORY INSTRUMENTS, POLLUTION CONTROL TECHNIQUES OF HOSPITAL WASTES [50 MARKS]
PRACTICAL PAPERS [TOTAL 100 MARKS]	
5	VENTILATOR, HUMIDIFIER, NEBULIZER, ASPIRATOR AND DEFIBRILATOR, MYOCARDIAL PROTECTION, CEREBRAL PERFUSION, MICRO EMBOLI & ETC [50 MARKS]
6	OPTICAL TRANSMISSION, OPTO-ELECTRONICS, FIBRE-OPTICS AND LASERS, ANALYTICAL INSTRUMENTS AND CLINICAL LABORATORY INSTRUMENTS [50 MARKS]

M.Sc. 4th SEMESTER EXAMINATION

PAPER	PAPER CONTENT
THEORETICAL PAPERS [TOTAL 150 MARKS]	
10	ENDOSCOPY: FLEXIBLE AND RIGID, DIALYSIS AND RENAL TECHNIQUES, CARDIO-VASCULAR AND CARDIO THORACIC EQUIPMENTS [50 MARKS]
11	COMPUTERS IN MEDICAL EQUIPMENT, HOSPITAL INFORMATION MANAGEMENT, TELEMETRY AND TELEMEDICINES [50 MARKS]
PRACTICAL PAPERS [TOTAL 100 MARKS]	
7	CARDIO-VASCULAR AND CARDIO THORACIC EQUIPMENTS, TELEMETRY AND TELEMEDICINE [50 MARKS]
8	COMPUTERS IN MEDICAL EQUIPMENT, HOSPITAL INFORMATION MANAGEMENT AND GRAND VIVA [50 MARKS]
9	PROJECT AND SEMINAR [50 MARKS]