

B. Sc. MEDICAL TECHNOLOGY (OPERATION THEATRE) (BOT)
SEMESTER -IV EXAMINATION, JUNE-2026

(BOT401) INTRODUCTION TO BASIC SURGICAL EQUIPMENT'S (OT)

[Time allotted: Three Hours]

[Max Marks: 100]

Note: Read all the instructions carefully

Answer all questions in serial order. Draw suitable diagrams wherever necessary

Q. 1. Objective type questions: (Attempt All)

(10 x 02 = 20)

(Very short/ short answer/ MCQ/ One liners/ Fill in the blanks/ True/False)

- | | |
|--|--|
| <p>a. Abdominal retractors are sterilized by:
CO1 PO 1,2,3,4,5,8,9</p> <p>i. Autoclave
 ii. Hot air oven
 iii. Glutaraldehyde
 iv. Ethylene oxide</p> <p>b. Monocryl is absorbed in: CO1 PO 1,2,3,4,5,8,9</p> <p>i. 30 days
 ii. 50 days
 iii. 60 days
 iv. 90 days</p> <p>c. Abdominal drains are made of:
CO1 PO 1,2,3,4,5,8,9</p> <p>i. PVC
 ii. Latex
 iii. Plastic
 iv. Rubber</p> <p>d. Dye used in intra-op cholangiogram:
CO5 PO 1,2,3,4,5,8,9</p> <p>i. Barium sulphate
 ii. Iodine
 iii. Mannitol
 iv. Gastrograffin</p> <p>e. Angle of vision of laparoscope used in laparoscopic cholecystectomy is: CO1 PO 1,4,5,6,7,8,9</p> <p>i. 0 degree
 ii. 30 degrees
 iii. 45 degrees
 iv. 60 degrees</p> | <p>f. Sutures are sterilised by: CO1 PO 1,2,3,4,5,8,9</p> <p>i. Autoclave
 ii. Ethylene Oxide
 iii. Gamma Radiation
 iv. Glutaraldehyde</p> <p>g. Gas used in laparoscopy is: CO3 PO1,4,5,6,7,8,9</p> <p>i. Carbon dioxide
 ii. Nitrogen
 iii. Room air
 iv. Helium</p> <p>h. Absorbable suture is: CO1 PO 1,2,3,4,5,8,9</p> <p>i. Nylon
 ii. Silk
 iii. Catgut
 iv. Cotton</p> <p>i. Light cable used in laparoscopy is made of:
CO3 PO 1,4,5,6,7,8,9</p> <p>i. Fluid
 ii. Glass
 iii. Optical fiber
 iv. Metal</p> <p>j. Mesh fixation in hernia surgery is done by which suture: CO1 PO 1,2,3,4,5,8,9</p> <p>i. Vicryl
 ii. Monocryl
 iii. Silk
 iv. Prolene</p> |
|--|--|

Q. 2. Short notes/ Short answer type questions (Attempt any Five)

(05 x 04 = 20)

- | | |
|--|-----------------------|
| a. Tubes used in general surgery | CO1 PO 1,2,3,4,5,8,9 |
| b. Vascular clamps | CO1 PO 1,2,3,4,5,8,9 |
| c. Laparoscopic trolley setup | CO3 PO 1,2,3,4,5,8,9 |
| d. Maintenance of OR table | CO7 PO 1,2,3,4,5,8,9 |
| e. Uses of suction machine | CO10 PO 1,2,3,4,5,8,9 |
| f. Different type of forceps in surgery and their sterilization | CO1 PO 1,2,3,4,5,8,9 |
| g. Maintenance of OT lights | CO8 PO 1,2,3,4,5,8,9 |

P.T.O....

Q. 3. Structured questions (Attempt any **Three**)

(03 x 10 = 30)

- | | |
|--|----------------------|
| a. (i) Different types of retractors.
(ii) Write in detail about Thompson's retractor.
(iii) Sterilization techniques for retractors. | CO1 PO 1,2,3,4,5,8,9 |
| b. (i) Energy sources in surgery
(ii) Types of cautery devices
(iii) Harmonic scalpel | CO2 PO 1,2,3,4,5,8,9 |
| c. (i) Different types of sutures in surgery
(ii) Characteristics of an ideal suture
(iii) Suturing techniques for skin closure | CO1 PO 1,2,3,4,5,8,9 |
| d. (i) Classify different types of abdominal drains.
(ii) Indications of drains in abdominal surgeries.
(iii) Complications of abdominal drains. | CO1 PO 1,2,3,4,5,8,9 |

Q. 4. Long Answer/ Essay type questions (Attempt any **Two**)

(02 x 15 = 30)

- | | |
|--|----------------------|
| a. (i) Classify surgical needles.
(ii) Applications of surgical needles. | CO1 PO 1,2,3,4,5,8,9 |
| b. (i) Uses of C-arm in surgery
(ii) Safety precautions while using C-arm | CO5 PO 1,2,3,4,5,8,9 |
| c. (i) Basic laparoscopic instruments.
(ii) Care of laparoscopic instruments. | CO3 PO 1,2,3,4,5,8,9 |