**Hospital Planning and Design**

**Instructor: Dr Ashish Roy**

**Semester paper    2017  Set 2**                                         **60 marks**

1. **Draw a properly scaled plan of any ONE of the deptts listed below**

   **30 marks**

- **OPD**
  **With the following area program**

| Out Patient Department | | | |
|---|---|---|---|
| OPD 1 | 1 | 12 | 12 |
| OPD 2 | 1 | 12 | 12 |
| OPD 3 | 1 | 12 | 12 |
| OPD 4 | 1 | 12 | 12 |
| OPD 5 | 1 | 12 | 12 |
| OPD 6 | 1 | 12 | 12 |
| OPD 7 | 1 | 12 | 12 |
| OPD 8 | 1 | 12 | 12 |
| OPD 9 | 1 | 12 | 12 |
| OPD 10 | 1 | 12 | 12 |
| Waiting lobby OPD | 1 | 180 | 180 |
| Endoscopy with change/scrub/recovery | 1 | 60 | 60 |
| ECG/ECHO/TMT | 3 | 20 | 60 |
| Pt toilet m/f | 2 | 30 | 60 |
| Staff toilet for OPD m/f | 2 | 4 | 8 |
| Plaster rm | 1 | 20 | 20 |
| Minor OT with scrub and change | 1 | 40 | 40 |
| Physiotherapy | 1 | 60 | 60 |
| **Total** | | | **608** |

- **OT complex**
  **With the following area program and a max circulation of 60%**
  **Corridors – sterile 3000/ clean 2400/dirty 1200**

| OT Complex | | | |
|---|---|---|---|
| Entry Lobby/waiting | 1 | 60 | 60 |
| Pre-op-with toilet | 4 | 12 | 48 |
| Post op with toilet | 4 | 12 | 48 |
| PAC rm | 1 | 12 | 12 |
| Stores | 2 | 20 | 40 |
| OT Incharge Rm | 1 | 12 | 12 |
| OT Asstts Rm | 1 | 12 | 12 |
| Staff toilet | 2 | 5 | 10 |
| Change Rm Doctors with toilet | 1 | 10 | 10 |
| Change Rm Female Doctors with toilet | 1 | 3 | 3 |
| Change Rm Nurses with toilet | 1 | 10 | 10 |
| Change Rm Other staff with toilet | 1 | 10 | 10 |
| Doctor's Lounge with pantry | 1 | 30 | 30 |
| Staff Lounge | 1 | 20 | 20 |
| Operating Room | 4 | 48 | 192 |
| Equipment room | 1 | 20 | 20 |
| Frozen section | 1 | 15 | 15 |
| Scrub | 2 | 3 | 6 |
| Sterile store | 1 | 20 | 20 |
| Dirty Utility Rm | 1 | 3 | 3 |
| **Total** | | | **581** |

2. **Draw the functional flow chart of any TWO of the following deptts**
   **Maternity deptt**
   **Laundry**
   **Kitchen deptt**

**20 marks**

**3. Tick the correct choice**        **10 marks (1*10)**

**1. Radiology equipments are all except**

     a. **C T Scan**
     b. **MRI**
     c. **Ultrasound**
     d. **LINAC**

**2. Autoclave is used in**

a. Laboratory

b. CSSD

c. OR

d. All of above

3. IF the plot size is 40*40m and the FAR is 2 and the ground coverage is 25%, what would be the height needed to achieve this FAR

a. 6

b. 7

c. 8

d. 9

4. If the FAR is 6000 sqm and the ECS is 2/100sqm, how many cars parking area will be needed

a. 120

b. 180

c. 140

d. 160

5. How many air changes is recommended by NABH in a General OR

a. 20

b. 22

c. 25

d. 30

6. The minimum width of a staircase in a hospital as per NABH and NBC should be

a. 1 m

b. 1.5m

c. 2m

d. 2.5m

7. The gradient of a hospital ramp should be
a. 1:8
b. 1:10
c. 1:12
d. 1:15

8. Emergency should be located on the rear of the hospital
   a. Always
   b. Never
   c. Sometimes
   d. Not significant

9. The sie of X Ray room should be
   a. 240 sqft
   b. 260 sqft
   c. 300 sqft
   d. 350 sqft

10. Types of ICU – which one is incorrect
    a. Medical ICU
    b. Surgical ICU
    c. Burns ICU
    d. HDU