



RN-6711

B. Arch. - III (Sem. V) Examination

May / June - 2010

Building Services

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

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| नीचे दर्शायेले निशानीवाणी विगतो उत्तरवडी पर अवश्य लपवी. Fillup strictly the details of signs on your answer book. | Seat No. : |
| Name of the Examination : | <input type="text"/> |
| <input type="text" value="B. Arch. - 3 (Sem. 5)"/> | <input type="text"/> |
| Name of the Subject : | <input type="text"/> |
| <input type="text" value="Building Services"/> | <input type="text"/> |
| Subject Code No. : <input type="text" value="6"/> <input type="text" value="7"/> <input type="text" value="1"/> <input type="text" value="1"/> | <input type="text" value="Student's Signature"/> |
| Section No. (1, 2,...): <input type="text" value="Nil"/> | |

- (2) Figures to the right indicate full marks.
(3) All questions have to be attempted in one answer sheet only.
(4) Support your answers with neat and clean sketches wherever necessary.

1 (a) Fill in the blanks : 16

- (i) Traction lifts need _____ at bottom.
- (ii) Split A.C. has better air transfer capacity compared to _____ air condition.
- (iii) 1 ton refrigeration = _____ Btu.
- (iv) The _____ movement of people in newly erected multi-storey.
- (v) Buildings is principally achieved by lifts.
- (vi) The basic branches of air-conditioning are _____ system.
- (vii) Cooling is needed when the room temperature rises above threshold of _____.
- (viii) The ceiling of an auditorium or cinema hall generally have _____ finish.

- (ix) Absorption coefficient is a ratio of _____.
- (x) In small rooms with parallel walls _____ are generated.
- (xi) The magnitude of sound is expressed in _____.
- (xii) Recording studios shall have $R_t =$ _____ secs.
- (xiii) Reverberation is a phenomenon which depends upon _____ and _____.
- (xiv) Mufflers are used in _____ in order to control the noise disturbance.
- (xv) Soft furnishings help in _____ the reverberation time.
- (xvi) An occupied hall can have _____ reverberation time when compared to the empty one.

(b) Answer in one or two line each : (two marks each, any **two**) 4

- (i) Explain Viscous circle
- (ii) Define Latent heat of vapourizations
- (iii) What is the primary function of air conditioner?

2 (a) Explain goods lifts with schematic plans, sections and necessary views and its principle of functioning. 8

(b) Explain installation for Air-cooled unit with diagrams. 7

OR

(b) Why is its important to service your air-conditioning and refrigeration system?

3 (a) Answer in brief : 10

Explain split AC. Draw schematic split A.C. installation diagrams for 4.2mt \times 4.8 mt. bedroom with height of 3.0 mts. having only one 2.2 \times 1.5 mt window on shorter side facing south including A.C. capacity and other necessary details. (All three sides are open excluding east side having entrance of room)

- (b) Short notes (any **three**) **15**
- (i) Traction lift
 - (ii) Branches (types) of central air conditioning plant with its basic explanations.
 - (iii) Hydraulic lifts
 - (iv) Advantage and disadvantage of split A.C.
- 4 (a) What are the noise control measures? **10**
- (b) Draw and explain the salient features of an auditoriums for 800 seating capacity, hall design, and its typical cross section. Also draw any one joinery detail and label it.
- 5 Short notes : (any **three**) **15**
- (i) Outdoor sound propagation and acoustical design concerns.
 - (ii) Noise control strategies
 - (iii) Sound masking
 - (iv) Commercially available acoustic surface finishes for walls and ceilings
 - (v) Sound transmission class and its application.
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