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Code: 5G522

IV B.Tech. I Semester Supplementary Examinations April 2019

Glass in buildings : Design and Applications

(Civil Engineering)

Max. Marks: 75

Time: 3 Hours

PART-A**Each question carries ONE mark****1x35=35M**

- Name the flux that brings N_a , and reduces the melting point of silica.
 - Calcium Oxide
 - Sodium Sulphate
 - Soda Ash
 - Dolomite
- The amount of Zinc that is usually used in the float bath is
 - 200-230 tons
 - 200-250 tons
 - 100-150 tons
 - 100-130 tons
- The flattest of flat surface that anyone can focus on earth is _____.
 - Air
 - Land
 - Water
 - Table
- _____ Code is used to calculate the wind speed.
 - IS 874
 - IS 875
 - IS 975
 - IS 974
- Choose the parameters that can be calculated in Thickness analysis of Glass Wizard?
 - Wind speed
 - Panel size
 - Impact of glass on the building
 - Glass combination
- Name the standard which gives the detail explanation about daylight factor?
 - SP 40 standard
 - SP 42 standard
 - SP 41 standard
 - SP 43 standard
- What is the formula for calculating daylight factor?
 - $DF=SC+ERC+IRC$
 - $DF=SC+ERC_IRC$
 - $DF=SC_ERC_IRC$
 - $DF=SC_ERC+IRC$
- Controlling the climate around the building is called as _____.
 - Mechanical control
 - Micro climatic control
 - Natural variation
 - Maintaining building envelop
- What are types of metrics that is used in day lighting?
 - Point of time metrics
 - Point to point metrics
 - Single metrics
 - Annual metrics
- Out of following glasses, which glass tints on demand?
 - Reflecting glass
 - Switchable and projectable glass
 - Electro chromic glass
 - Designer glass
- What are the tests have to be done on coated glass?
 - Erichsen brush test
 - Nagy test
 - Taber test
 - Spectrophotometer test
- _____ is an example of passive daylight components.
 - Heliostats
 - Fiber optics
 - Skylights
 - Light pipes

13. _____ is used to figure out the correct orientation of a building.
 - a) The 1_meter rule
 - b) Well geometry V_s wall reflectance
 - c) Section aspect ratio
 - d) North_south rule
14. Name the type of glazing which has low visual transmittance.
 - a) Daylight glazing
 - b) Internal_glazing
 - c) Visual glazing
 - d) External glazing
15. Inside the light pipe the sunlight is reflected because the interior surface of the light
 - a) Diffusive
 - b) Transitive
 - c) Reflective
 - d) Emissive
16. Which of the following techniques are used in the skylights?
 - a) Lens guides
 - b) Solar blade
 - c) Sun_tracker
 - d) Sunlight bender
17. What are the properties of visual glazing?
 - a) Low visual transmissivity
 - b) Low solar heat gain
 - c) High solar heat gain
 - d) Control over glazing
18. UDI stands for
 - a) Useless daylight illuminance
 - b) Unique device identifier
 - c) Useful daylight illuminance
 - d) Unified display interface
19. _____ Changes the tint of the glass based on solar radiation.
 - a) False colour rendering
 - b) Isolux contours
 - c) Dynamic façade
 - d) Skin section
20. _____ Part of daylight simulation can be of discrete numbers or rendering.
 - a) Input
 - b) Processing
 - c) Output
 - d) Processing variable
21. _____ uses AutoCAD 360 computing to produce results.
 - a) Licaso
 - b) Revit
 - c) IES_VE
 - d) Daysim
22. _____ provides virtual simulation modeling.
 - a) Diva
 - b) Revit
 - c) IES_VE
 - d) Design builder
23. The spectral response of illuminance sensor should be closely similar to _____.
 - a) Pyranometer
 - b) Human eye
 - c) Close loop controller
 - d) Open loop controller
24. Name the sensor which has cosine correction as per lamberts cosine law.
 - a) Illuminance sensor
 - b) Pyranometer
 - c) Force sensor
 - d) Temperature sensor
25. A sound that is loud, unpleasant, unwanted or undesired is called as _____.
 - a) Vibration
 - b) Noise
 - c) Silence
 - d) Eco
26. Illuminance is measured in _____.
 - a) Lambda
 - b) Foot Candles
 - c) Lumens
 - d) Decibels
27. Which of the following methods are used to calculate the daylight area?
 - a) DIA method
 - b) Simulation method
 - c) DCM method
 - d) Manual calculation method
28. Name the service providers that provide cloud computing facility in daylight simulation
 - a) REVIT
 - b) LICASO
 - c) SEFAIRA
 - d) LIGHT STANZA

29. Acoustic performance of the glass is based on two factors. They are _____.
- a) Transmission loss b) Thickness c) RW d) PVB
30. What should be the angle of glass separators?
- a) 3–6 degree b) 3–4 degree c) 3–8 degree d) 4–3 degree
31. Tampering process increases the _____ of glass.
- a) Aesthetics b) Capacity c) Mechanical strength d) Physical property
32. At what temperature Nickel sulfide expansion is accelerated?
- a) 280° C b) 270° C c) 260° C d) 290° C
33. The bond strength of silicon should be of _____.
- a) 320 KP_a b) 450 KP_a c) 360 KP_a d) 430 KP_a
34. Which tape is used for insulating glass in 10 minutes?
- a) Double sided tape b) Masking tape c) Clear partition tape d) Blocking tape
35. Which type of silicon is mostly used for fixing exterior glass?
- a) Grey silicon b) Black silicon c) White silicon d) Clear silicon

PART B

Each question carries 2 marks

2X20=40M

36. What will be the curing time for fixing glass using silicon?
- a) 2-3 hours b) 3-4 hours c) 6-7 hours d) 8-9 hours
37. Which type of silicon has to be used as a sealant?
- a) Acetoxy silicone b) Alkoxy silicone c) Epoxy silicone d) Poly ester silicone
38. _____ is considered as the best material for stabilizer rod and fixing brackets.
- a) Brass b) Brass SS 304 c) Brass C 360 d) Brass C 180
39. Benefits of laminated glass:
- a) Cyclone resistance b) Blast resistance c) Solar control d) Noise control
40. Pick out the type of deformities that occur due to improper fixing of glasses?
- a) Edge corrosion b) Mirror corrosion c) Adhesive incompatibility d) Paint peeling
41. What are the benefits of perfect glass installation?
- a) Save time b) Save cost c) It is safe d) Gives good stability
42. Which type of glass used in wired glass?
- a) Annealed glass b) Tempered glass c) Silvered glass d) Double glazed units
43. At EW rated glass what does the W stands for?
- a) Integrity b) Radiation control c) Insulation d) Lamination
44. For apartments without balconies, _____ must be kept at every 60 m, then at 24m and 15m to ensure fire safety.
- a) Balconies b) Lobbies c) Refuge areas d) Stairway doors

45. EI glasses should have the resistance of average and maximum temperature rise of _____ respectively.
- a) <120, <160 degrees b) <140, <160 degrees
c) <140, <180 degrees d) <160, <180 degrees
46. First generation glasses are coated using _____ technology.
- a) PVD b) CVD c) Magnetron sputtering d) Metallic
47. _____ Glasses are coated with double layers of silver.
- a) Generation III b) Generation IV c) Generation V d) Generation VI
48. The need of high performance leads to the development of _____ glasses.
- a) Generation III b) Generation IV c) Generation V d) Generation VI
49. Pic out the types of FRG.
- a) E rated glass b) EW rated glass c) ES rated glass d) EI rated glass
50. The wall designed prior to 20th century which is lighter and cannot support high dead loads is termed as _____.
- a) Curtain wall b) Front wall c) Shear wall d) Long wall
51. Name the system in which both the stick and unitized systems are adopted.
- a) Pressure equalized system b) Semi unitized system
c) Cladding system d) Stick system
52. What provides an allowance for vertical movement?
- a) 4 way joint b) Split transoms c) Split mullions d) Bracket joints
53. How many percentage of aluminium is present in Bauxite ore?
- a) 10-20% b) 20-30% c) 30-40% d) 40-50%
54. What are the major types of safety glass?
- a) Tittered glass b) Toughened glass c) Double unit glass d) Laminated glass
55. Which body prescribes the requirements of high_performance building?
- a) ICBC b) ISBC c) ECBC d) ESBS