3 -Days GRIHA Training Programme on GRIHA V. 2015

Organized by GRIHA Council, 15th -17th October 2018, at Nagpur

Day I					
10:00 – 10:30	Introduction	Overview of GRIHA and GRIHA Certified Professional and Evaluator examination			
10:30 - 10:45	Tea Break				
10:45 – 13:00	Session-1: Site Planning & Construction Management	Criterion 1-Site selection. Criterion 2-Low impact design. Criterion 3-Design to mitigate UHIE. Criterion 4-Site imperviousness factor. Criterion 5-Air and Water pollution control. Criterion 6-Preserve and protect landscape during construction. Criterion 7-Construction management practices.	The session shall start with a detailed presentation on sustainable site planning criteria of GRIHA with examples. During the practical session, the participants shall be divided into multiple groups by the facilitator. A design problem shall be given to the groups. The group shall be required to carry out a sustainable site planning exercise based on the problem. Scale models for varied site features (trees, lights, utility corridors) shall be used to carry out the exercise. The group representative shall be required to make a presentation on the proposed scheme by the respective group. The facilitator shall evaluate each scheme and give a critique on the same.		
13:00 – 14:00	Lunch Break				
14:00 – 15:45	Session - 2: Water and Waste Management	Criterion 14-Use of low-flow fixtures and systems. Criterion 15-Reducing landscape water demand. Criterion 16-Water Quality. Criterion 17- On-site water reuse. Criterion 18-Rainwater Recharge.	The facilitator shall give a detailed presentation on water, waste water and solid waste related issues and solutions through GRIHA. The presentation shall focus on management of waste and water in building sector with examples from current green building projects of GRIHA		
15:45 – 16:00	Tea break				
16:00-16:30		Criterion 22-Avoid post- construction landfill. Criterion 23-Treat organic waste on site.			
	Day II				
10:00 – 11:00	Session-3: Occupant Comfort & Well- Being - Artificial Lighting, Thermal	Criterion 11-Achieving indoor comfort requirements (visual/thermal/acoustic).	A detailed presentation will be made on optimizing artificial lighting design, achieving thermal comfort and Energy Conservation		

Building Code (ECBC) GRIHA requirements.		0 4	I	P 11 G 1 G 25
11:00 - 11:15 Tea Break		& Acoustic		Building Code (ECBC)
11:00 - 11:15 Tea Break Criterion 08 - Energy efficiency A detailed presentation will be made on achieving energy efficiency in the projects through various energy conservation measures. The session shall give a brief overview of energy optimising strategies such as efficient building envelopes. There will be a small exercise on Energy efficiency in the projects through various energy conservation measures. The session shall give a brief overview of energy optimising strategies such as efficient building envelopes. There will be a small exercise on Energy Performance Index (EPI) calculation. 14:00 - 14:30 Session-4: Socio- Economic Strategies Criterion 24-Labour safety and sanitation. Criterion 25-Design for Universal Accessibility. Criterion 25-D		Connort.		
1:15-13:00 Session-3: Occupant Comfort & Well-Being - Artificial Lighting, Thermal & Acoustic Comfort (contd.) Acoustic Comfort (contd.) Session-4: Socio-Being - Acoustic Comfort (contd.) Session-4: Socio-Being - Acoustic Comfort (contd.) Aco	11.00	m n i		Grant requirements.
Confort & Well-Beling - Artificial Lighting, Thermal & Acoustic Comfort (contd.) Individual Lighting thermal & Acoustic Comfort (contd.) Session-4: Socio-Economic Strategies Criterion 24-Labour safety and sanitation. There will be a small exercise on Energy Performance Index (EPI) calculation. A detailed presentation shall be made on providing better working and living conditions for the labours during construction work and for the workers post occupancy with appropriate examples from GRIHA projects. Session-5:			Criterian OR France CC	A detailed account of the 1111
14:00 - 14:30 Session-4: Socio-Economic Strategies Criterion 24-Labour safety and santation. Criterion 25-Design for Universal Accessibility. Criterion 26-Dedicated facilities for service staff. Criterion 27-Increase in environmental awareness. 14:30-15:00 Session-5: Sustainable Building Materials Contd.) Criterion 19-Utilization of BIS recommended waste materials in building structure. Criterion 27-Deduction in embodied energy of building structure. Criterion 19-Utilization of BIS recommended waste materials and their implication in GRIHA with appropriate examples. 15:15 - 16:15 Session-5: Sustainable Building Materials (Contd.) Criterion 19-Utilization of BIS recommended waste materials and their implication in embodied energy of building structure. Criterion 19-Utilization of BIS recommended waste materials in building interiors. Contd. A detailed presentation shall be made on low-energy building structure. Criterion 19-Utilization of BIS recommended waste materials in building interiors. A detailed presentation shall be made on low-energy building materials and their implication in GRIHA with appropriate examples. A detailed presentation shall be made on low-energy building materials and their implication in GRIHA with appropriate examples. A detailed presentation shall be made on low-energy building materials and their compounds in building sand use of low Ozone Depleting Potential (ODP) materials with appropriate examples. A detailed presentation shall be made on maintaining good indoor air quality in the buildings and use of low Volatile organic building interiors A detailed presentation shall be made on maintaining good and or document of low Volatile organic building interiors A detailed presentation shall be made on maintaining good indoor air quality in the buildings and use of low Volatile organic building interiors A detailed presentation shall be made on low-Volatile organic building interiors A detailed presentation shall be made on low-Volatile	11:15 – 13:00	Comfort & Well- Being - Artificial Lighting, Thermal & Acoustic Comfort	Criterion 08 –Energy efficiency	made on achieving energy efficiency in the projects through various energy conservation measures. The session shall give a brief overview of energy optimising strategies such as efficient building envelope, equipment and HVAC design. There will be a small exercise on Energy Performance Index (EPI)
Economic Strategies Sanitation. Criterion 25-Design for Universal Accessibility. Criterion 26-Dedicated facilities for service staff. Criterion 27-Increase in environmental awareness.	13:00 – 14:00	Lunch Break		Curculation.
Economic Strategies Sanitation. Criterion 25-Design for Universal Accessibility. Criterion 26-Dedicated facilities for service staff. Criterion 27-Increase in environmental awareness.	14:00 – 14:30	Session-4: Socio-	Criterion 24-Labour safety and	A detailed presentation shall be
Universal Accessibility. Criterion 26-Dedicated facilities for service staff. Criterion 27-Increase in environmental awareness. 14:30-15:00		Economic Strategies	sanitation.	made on providing better working
Criterion 26-Dedicated facilities for service staff. Criterion 77-Increase in environmental awareness.				
for service staff. Criterion 27-Increase in environmental awareness. 14:30-15:00 Session-5: Sustainable Building Materials 15:00-15:15 Tea break 15:15 – 16:15 Session-5: Sustainable Building Materials (Contd.) Criterion 20-Reduction in embodied energy of building structure. Criterion 21-Use of low-environmental impact materials in building structure. Criterion 19-Utilization of BIS recommended waste materials in building structure. Criterion 21-Use of low-environmental impact materials in building structure. Criterion 19-Utilization of BIS recommended waste materials in building structure. Criterion 21-Use of low-environmental impact materials in building structure. Criterion 19-Utilization of BIS recommended waste materials in building structure. Criterion 19-Utilization of BIS recommended waste materials in building structure. A detailed presentation shall be made on low-energy building materials and their implication in GRIHA with appropriate examples. A detailed presentation shall be made on renewable energy utilization. Criterion 10-Zero ODP materials with appropriate examples. 11:15 – 11:30 Tea Break Criterion 12-Maintaining good indoor air quality in the buildings and use of low -Volatile organic Compounds (VOC) paints and other compounds in buildings and use of low -Volatile organic Compounds (VOC) paints and				
14:30-15:00 Session-5: Criterion 19-Utilization of BIS recommended waste materials in building structure. A detailed presentation shall be made on low-energy building materials and their implication in GRIHA with appropriate examples.				
14:30-15:00 Session-5: Sustainable Building Materials Criterion 19-Utilization of BIS recommended waste materials in building structure. A detailed presentation shall be made on low-energy building materials and their implication in GRIHA with appropriate examples.			Criterion 27-Increase in	
Sustainable Building Materials recommended waste materials in building structure. made on low-energy building materials and their implication in GRIHA with appropriate examples.				
Building Materials in building structure. materials and their implication in GRIHA with appropriate examples.	14:30-15:00			
15:00-15:15 Tea break				
15:00-15:15 Tea break		Dunding Water and	in surang structure.	
15:15 – 16:15 Session-5: Sustainable Building Materials (Contd.) Criterion 20-Reduction in embodied energy of building structure. Criterion 21-Use of low-environmental impact materials in building interiors. Criterion 19-Utilization of BIS recommended waste materials in building structure. A detailed presentation shall be made on low-energy building materials and their implication in GRIHA with appropriate examples.				
Sustainable Building Materials (Contd.) embodied energy of building structure. Criterion 21-Use of lowenvironmental impact materials in building interiors.	15:00-15:15			
Building Materials (Contd.) Structure. Criterion 21-Use of low-environmental impact materials in building interiors. Criterion 19-Utilization of BIS recommended waste materials in building structure. A detailed presentation shall be made on low-energy building materials and their implication in GRIHA with appropriate examples.	15:15 – 16:15			Contd.
Criterion 21-Use of low-environmental impact materials in building interiors.			= -	
environmental impact materials in building interiors.				
Criterion 19-Utilization of BIS recommended waste materials in building structure.		(======)		
recommended waste materials in building structure. Day III 10:00 – 11:15 Session-6: Energy Management Criterion 9-Renewable energy utilization. Criterion 10-Zero ODP materials Criterion 10-Zero ODP materials with appropriate examples. 11:15 – 11:30 Tea Break Criterion 12-Maintaining good IAQ. Criterion 13-Use of low-VOC paints and other compounds in buildings and use of low — Volatile organic Compounds (VOC) paints and			in building interiors.	
in building structure. Day III	16:15-16:45			
Day III				
Day III 10:00 – 11:15 Session-6: Energy Management Criterion 9-Renewable energy utilization. Criterion 10-Zero ODP materials Criterion 10-Zero ODP materials with appropriate examples. 11:15 – 11:30 Tea Break Criterion 12-Maintaining good IAQ. Criterion 13-Use of low-VOC paints and other compounds in buildings and use of low – Volatile organic Compounds (VOC) paints and			in building structure.	
10:00 – 11:15 Session-6: Energy Management Criterion 9-Renewable energy utilization. Criterion 10-Zero ODP integration in buildings and use of low Ozone Depleting Potential (ODP) materials with appropriate examples. 11:15 – 11:30 Tea Break Criterion 12-Maintaining good IAQ. Criterion 13-Use of low-VOC paints and other compounds in building interiors A detailed presentation shall be made on renewable energy integration in buildings and use of low Ozone Depleting Potential (ODP) materials with appropriate examples. A detailed presentation shall be made on maintaining good indoor air quality in the buildings and use of low – Volatile organic Compounds (VOC) paints and				
10:00 – 11:15 Session-6: Energy Management Criterion 9-Renewable energy utilization. Criterion 10-Zero ODP integration in buildings and use of low Ozone Depleting Potential (ODP) materials with appropriate examples. 11:15 – 11:30 Tea Break Criterion 12-Maintaining good IAQ. Criterion 13-Use of low-VOC paints and other compounds in building interiors A detailed presentation shall be made on renewable energy integration in buildings and use of low Ozone Depleting Potential (ODP) materials with appropriate examples. A detailed presentation shall be made on maintaining good indoor air quality in the buildings and use of low – Volatile organic Compounds (VOC) paints and				
Management Utilization. Criterion 10-Zero ODP materials Management Utilization. Criterion 10-Zero ODP materials Mozone Depleting Potential (ODP) materials with appropriate examples. 11:15 – 11:30 Tea Break Criterion 12-Maintaining good IAQ. Criterion 13-Use of low-VOC paints and other compounds in building interiors made on renewable energy integration in buildings and use of low Ozone Depleting Potential (ODP) materials with appropriate examples. A detailed presentation shall be made on maintaining good indoor air quality in the buildings and use of low – Volatile organic Compounds (VOC) paints and			Day III	
Criterion 10-Zero ODP integration in buildings and use of low Ozone Depleting Potential (ODP) materials with appropriate examples. 11:15 – 11:30 Tea Break Criterion 12-Maintaining good IAQ. (contd.) Criterion 13-Use of low-VOC paints and other compounds in building interiors Criterion 10-Zero ODP integration in buildings and use of low Ozone Depleting Potential (ODP) materials with appropriate examples. A detailed presentation shall be made on maintaining good indoor air quality in the buildings and use of low – Volatile organic Compounds (VOC) paints and	10:00 – 11:15			
materials low Ozone Depleting Potential (ODP) materials with appropriate examples. 11:15 – 11:30 Tea Break Criterion 12-Maintaining good IAQ. (contd.) Criterion 13-Use of low-VOC paints and other compounds in building interiors low Ozone Depleting Potential (ODP) materials with appropriate examples. A detailed presentation shall be made on maintaining good indoor air quality in the buildings and use of low – Volatile organic Compounds (VOC) paints and		Management		
11:15 – 11:30 Tea Break 11:30 – 12:15 Session-6: Energy Management (contd.) Criterion 12-Maintaining good IAQ. Criterion 13-Use of low-VOC paints and other compounds in building interiors (CODP) materials with appropriate examples. A detailed presentation shall be made on maintaining good indoor air quality in the buildings and use of low – Volatile organic Compounds (VOC) paints and			1	
11:15 – 11:30 Tea Break 11:30 – 12:15 Session-6: Energy Management (contd.) Criterion 12-Maintaining good IAQ. Criterion 13-Use of low-VOC paints and other compounds in building interiors examples. A detailed presentation shall be made on maintaining good indoor air quality in the buildings and use of low – Volatile organic Compounds (VOC) paints and			mauriais	
11:30 – 12:15 Session-6: Energy Management (contd.) Criterion 12-Maintaining good IAQ. Criterion 13-Use of low-VOC paints and other compounds in building interiors A detailed presentation shall be made on maintaining good indoor air quality in the buildings and use of low – Volatile organic Compounds (VOC) paints and				
Management (contd.) IAQ. made on maintaining good indoor air quality in the buildings and use of low – Volatile organic building interiors Compounds (VOC) paints and			1	
(contd.) Criterion 13-Use of low-VOC air quality in the buildings and use of low – Volatile organic building interiors Compounds (VOC) paints and	11:30 – 12:15			
paints and other compounds in building interiors use of low – Volatile organic Compounds (VOC) paints and		_		
building interiors Compounds (VOC) paints and		(conta.)		

12:15 – 13:00	Session-7: Performance Metering and Monitoring	Criterion 28- Smart metering and monitoring. Criterion 29-Operation, Maintenance Protocols. Criterion 30-Performance Assessment for Final Rating. Criterion 31-Innovation	A detailed presentation will be made on the importance of O&M protocols, smart metering and monitoring.
13:00 – 14:00	Lunch Break		
14:00 – 16:30	Session-8: Occupant comfort and well being- Daylighting only	Criterion 11-Achieving indoor comfort requirements (visual/thermal/acoustic).	The second session on building design optimisation shall focus on two broad parameters; namely the basics of solar passive building design and the quantitative analysis of daylight based on criterion- 11. The session shall cover the basics of daylight integration in buildings for optimizing energy consumption and achieving visual comfort. There will be a small exercise for applying daylight design knowledge gained in the session.
15:45 – 18:00	Closing remarks+ Feedback + Tea break		