POORNIMA

INSTITUTE OF ENGINEERING & TECHNOLOGY

Affiliated to RTU, Kota • Approved by AICTE & UGC under 2(f) • Accredited by NAAC and NBA

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WORKSHOP

REPORT

ON

STADDPRO SOFTWARE

Organized by

DEPARTMENT OF CIVIL ENGINEERING, PIET

Mr. Rituraj Singh Rathore
Event Co-coordinator

Dr. Pran Dadhich
(HOD Civil, Department)

Objective:

To Enhance the skills of students like Designing, taking different challenges, designing different structure, problem-solving techniques & how to work in Software
One can create new world with his ideas and innovations. A civil engineer can built or create many structures with unique ideas which can serve as betterment of society. So an engineer require certain skills to developed which help in all these work such as team work ,thought process, quick decision ,taking challenges for betterment of society, designing a structure ,management, creativity etc.

Expected Outcome

By this Workshop student got the proper knowledge about the working of STAAD. PRO. Also they got the ideas how to operate the software and applying the theoretical knowledge in the designing tool.

Instructor

Mr. Rajesh Verma

Passed out in 2010 from Regional College Of Engineering

Post – Owner of Lakshya Engineering Institute.

Participants

The Workshop was well carried out. There was full of excitement as well as enthusiasm among student of civil 3rd year. There were 43 students participants and faculty members fully experienced in their following field, and are as follows Mr. Rituraj Singh Rathore.

A brief description of Workshop:

The Three days Workshop on Staad-Pro are conducted on the day of 18th to 20th March 2019.Workshop is totally driven for students of 3rd year, civil branch.

Venue- NB-31 CIVIL Dept.

18th to 20th March, 2019

We started our Workshop at 8:30am on the day18th March 2019 there were 43 students and 2 faculty members. In which Poornima Institute of Engineering & Technology provided a

seminar hall in which the students were seated. The instructor arrived at our Seminar Hall around 8:10 Am. Then we started our Workshop session, every student was very curious and excited about the workshop.

Three days workshop Divided into Five stages. Day Ist cover the two slot Ist and IInd and day IInd Cover the IIIrd and IVth Slot and Day Third we covered the Vth slot..

SLOT – I (GEOMETRY)

SLOT – II (ASSIGNING PROPERTY)

SLOT – III (APPLYING LOADING)

SLOT – IV (ANALYSING AND DESIGNING STRUCTURE)

SLOT – V (QUANTITY TAKEOFF)

SLOT – I (Geometry)

- Foundation is the lowest part of structure below ground level which provides a base for the building.
- Accurate structure geometry has to be modeled in the software in order to get précised results of analysis.

What we learned from foundation

We learn that the how a structure can be created as a model in the software

SLOT – II (Assigning properties)

We learned that how concrete and steel members are assigned with the desired dimensions.

SLOT – III (Applying Loads)

Columns & Beams are load bearing members which transfers the load on building to the foundation. We apply different load cases as per the requirement of the structural design.

SLOT – IV (Analyzing and Designing)

Analysis of the structure so created is done in order to check the incoming loads, Reactions, Moments, Deflections. Design of Concrete is done as per the IS:456 design code and the required values of steel and concrete area for a particular concrete member are easily determined.

SLOT – V (QUANTITY TAKEOFF)

The required amount of concrete and steel is determined from the quantity takeoff, and an estimate can be prepared with the help of these values.

Outcome & Evaluation:

After the Completion of three days workshop students have got the deep knowledge of Staad Pro Software and all participants are capable to analysis and design the components of building so that an analytical problem conducted by the **Mr. Rajesh Verma** and evaluate the student's performance.

Question Paper

Using Staad Pro Software Analysis and Design the Problems

1. Calculate the Area of steel of an RC beam 250mm wide, the depth of the centre of reinforcement being 600 mm. Assume M20 concrete grade And Fe415 if the factored moment 67 KN-m by using of limit State method also Draw Cross Section Diagram of beam.
2. Determine the moment of resistance of an RC beam 275mm wide, the depth of the centre of reinforcement being 550 mm. Assume M15 concrete grade And Fe500 if the beam is reinforced 5bars of 16mm diameter, by using of limit State method also Draw Cross Section Diagram of beam.
3. Design a Singly Reinforced Rectangular beam to resist bending moment of 45KN-m and M15 and Fe450 mild steel by limit State

method. Also apply check for minimum Reinforcement as per IS456-2000.
4. Design a 5m long Singly Reinforced Rectangular beam carries superimposed load20KN/m for d=500mm.Neglect self weight by LSM.Take M15 and Fe250.

Elevation sheet			
Sr. No	**Reg. No**	**Name of Students**	**Max. Marks**
1	PIET16CV026	VISHNU SHARMA	5
2	PIET16CV053	PRASHANT KUMAR RAVI	8
3	PIET16CV054	PRASHANT MOTHIYA	6
4	PIET16CV055	PRAVEEN KUMAR SAINI	7
5	PIET16CV056	PRAYANSHU JAGAT MEENA	Absent
6	PIET16CV058	RACHIT SHRINGI	4
7	PIET16CV059	RAHUL GURJAR	9
8	PIET16CV061	RAJANISH CHANDRA SOLANKI	6
9	PIET16CV062	RAVI KUMAR	7
10	PIET16CV063	RAVI KUMAR MEENA	8
11	PIET16CV064	RISHABH SINGH	Absent
12	PIET16CV065	RITEEK JAIN	5
13	PIET16CV067	SACHIN PAHADIA	6
14	PIET16CV069	SALMAN KHAN	2
15	PIET16CV070	SANJAY KUMAR BAIRWA	Absent
16	PIET16CV071	SANTRAJ KUMAR SINGH	5
17	PIET16CV072	SATYAM	Absent
18	PIET16CV073	SAURABH SIDDHARTHA	8
19	PIET16CV075	SHEETAL	6
20	PIET16CV076	SHORYA SETHI	Absent
21	PIET16CV077	SHUBHAM JAGARAWAL	4
22	PIET16CV078	SHUBHAM JUNWAL	5

23	PIET16CV079	SHUBHAM TATAWAT	8
24	PIET16CV080	SIDDHARTH SINGH	6
25	PIET16CV081	SOMESH KUMAR MEENA	6
26	PIET16CV082	SURENDRA DIDEL	9
27	PIET16CV083	SURENDRA SINGH MEENA	7
28	PIET16CV084	SURESH KUMAR CHOUDHARY	5
29	PIET16CV086	TANISHA PUNJABI	6
30	PIET16CV087	TARUN KUMAR MEENA	4
31	PIET16CV088	UTKARSH ARUN	8
32	PIET16CV089	VASIM AKRAM	Absent
33	PIET16CV090	VIDHANSHU JAISWAL	6
34	PIET16CV091	VIJENDRA KUMAR MEENA	4
35	PIET16CV092	VIKASH KUMAR MEENA	7
36	PIET16CV093	VIMAL MEENA	6
37	PIET16CV094	VISHNU NAMA	Absent
38	PIET16CV096	YASH GAUTAM	3
39	PIET16CV097	YASH KUMAR SAINI	5
40	PIET16CV098	YASHWANT MAHALA	1
41	PIET16CV099	YATENDER	6
42	PIET16CV100	YOGESH KUMAR MEENA	9
43	PIET17CE701	MD. FAHMY	7