**Intermediate Education Ontology**

**KSR-348**

**Competency Questions’ SPARQL Queries**

**Prefixes**

PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

PREFIX owl: <http://www.w3.org/2002/07/owl#>

PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>

PREFIX ksr: <http://www.semanticweb.org/sehrish/ontologies/2023/1/interedu#>

**G1: Admission**

|  |  |
| --- | --- |
| **ID** | **Question** |
| G1-A: | What are the attributes in the admission form? |
| G1-B: | Which institutes offer the intended program? |
| G1-C: | What is the duration of Inter program? |
| G1-D: | Which programs are available for Inter students? |

**Admission form for each student**

SELECT \*

WHERE { ?student a ksr:Student;

ksr:Fills ?Form.

}

|  |  |
| --- | --- |
| **G1-B:** | **Which institutes offer the intended program?** |

1. **Which college offers ICS Program**

SELECT ?ICSProgram ?College

WHERE {

?ICSProgram a ksr:ICS;

ksr:Offerd\_by ?College.

}

1. **Which college offers I.Com Program**

SELECT ?Program ?College

WHERE {

?Program a ksr:I.Com;

ksr:Offerd\_by ?College.

}

1. **Which college offers FSc. Program**

SELECT ?FScProgram ?College

WHERE {

?FScProgram a ksr:FSc;

ksr:Offerd\_by ?College.

}

|  |  |
| --- | --- |
| **G1-C:** | **What is the duration of Inter program?** |

1. **Duration of Inter Program**

SELECT ?Program ?Duration

WHERE {

?Program a ksr:Inter\_Program;

ksr:Duration ?Duration.

}

1. **Duration of ICS Program**

SELECT ?ICSProgram ?Duration

WHERE { ?ICSProgram a ksr:ICS;

ksr:Duration ?Duration.

}

1. **Duration of FSc Program**

SELECT ?FScProgram ?Duration

WHERE { ?FScProgram a ksr:FSc;

ksr:Duration ?Duration.

}

1. **Duration of FA Program**

SELECT ?FAProgram ?Duration

WHERE { ?FAProgram a ksr:FA;

ksr:Duration ?Duration.

}

1. **Duration of I.Com Program**

SELECT ?IComProgram ?Duration

WHERE { ?IComProgram a ksr:I.Com;

ksr:Duration ?Duration.

}

|  |  |
| --- | --- |
| **G1-D:** | **Which Inter programs are available for students After Matric?** |

SELECT ?IntermediatePrograms

WHERE {

?IntermediatePrograms a ksr:Inter\_Program.

}

**G2: Facilities & Non-Academic Aspects**

|  |  |
| --- | --- |
| **ID** | **Question** |
| G2-A: | Which facilities are given to students in college? |
| G2-B: | Which scholarships are available? |
| G2-C: | Which sources will be used to acquire scholarships? |
| G2-D: | What is the summer and winter vacations’ duration? |
| G2-E: | Which co-curricular functions take place at colleges? |

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| --- | --- |
| **G2-A:** | **Which facilities are given to students in college?** |

SELECT ?FacilitiesinCollege

WHERE {

?FacilitiesinCollege a ksr:College\_Campus\_Facilities.

}

|  |  |
| --- | --- |
| **G2-B:** | **Which scholarships are available?** |

SELECT ?Scholarships

WHERE {

?Scholarships a ksr:Scholarships.

}

|  |  |
| --- | --- |
| **G2-D:** | **What is the summer and winter vacations’ duration?** |

SELECT ?Holidays ?Duration

WHERE {

?Holidays a ksr:Holidays;

ksr:Duration ?Duration.

}

|  |  |
| --- | --- |
| **G2-E:** | **Which co-curricular functions take place at colleges?** |

SELECT ?Events

WHERE {

?Events a ksr:Events.

}

**G3: Boards**

|  |  |
| --- | --- |
| **ID** | **Question** |
| G3-A: | Which boards in Punjab are offering the Inter Programs? |
| G3-B: | Which attributes are there in the board registration form? |
| G3-C: | How many students are registered in each board? |

|  |  |
| --- | --- |
| **G3-A:** | **Which boards in Punjab are offering the Inter Programs?** |

SELECT ?BISEBoards

WHERE {

?BISEBoards a ksr:BISE.

}

|  |  |
| --- | --- |
| **G3-B:** | **Which attributes are there in the board registration form?** |

|  |  |
| --- | --- |
| **G3-C:** | **How many students are registered in each board?** |

1. **Without Count**

SELECT ?student ?Board

WHERE {

?student a ksr:Student;

ksr:Gets\_registered\_in ?Board.

}

1. **With Count**

SELECT ?Board (count(?student) as ?numberOfstudents)

WHERE {

?student a ksr:Student;

ksr:Gets\_registered\_in ?Board.

}

group by ?Board

order by desc(?numberOfstudents)

**G4: Institutional Requirements**

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| **ID** | **Question** |
| G4-A: | When are Intermediate program classes starting? |
| G4-B: | When to End an Intermediate program? |

|  |  |
| --- | --- |
| **G4-A:** | **When are Intermediate program classes starting?** |

SELECT ?College ?Classes\_commencementDate

WHERE {

?College a ksr:College;

ksr:Class\_Commencement\_Date ?Classes\_commencementDate.

}

|  |  |
| --- | --- |
| **G4-B:** | **When to End an Intermediate program?** |

SELECT ?College ?Classes\_End

WHERE {

?College a ksr:College;

ksr:Class\_End\_Date ?Classes\_End.

}

**G5: Curriculum (Academic)**

|  |  |
| --- | --- |
| **ID** | **Question** |
| G5-A: | What are the contents of the Syllabus for 1st and 2nd years? |
| G5-B: | Who is responsible for approving the subjects for intermediate? |
| G5-C: | Who is responsible for preparing and approving the syllabus for intermediate? |
| G5-D: | Which subjects are there in each inter-program? |
| G5-E: | Which subjects are elective? |
| G5-F: | Which subjects are compulsory? |
| G5-G: | What are language choices for students? |

|  |  |
| --- | --- |
| **G5-A:** | **What are the contents of the Syllabus for 1st and 2nd years?** |

SELECT ?Program ?SyllabusLink

WHERE {

?Program a ksr:Syllabus;

ksr:SyllabusURL?SyllabusLink.

}

|  |  |
| --- | --- |
| **G5-B:** | **Who is responsible for approving the subjects for intermediate?** |

SELECT ?subject ?Approved\_by

WHERE {

?Approved\_by a ksr:BISE;

ksr:Approves ?subject.

}

|  |  |
| --- | --- |
| **G5-C:** | **Who is responsible for preparing and approving the syllabus for intermediate?** |

SELECT ?Syllabus ?Prepared\_by\_Institute

WHERE {

?Prepared\_by\_Institute a ksr:PCTB;

ksr:Makes ?Syllabus.

}

|  |  |
| --- | --- |
| **G5-D:** | **Which subjects are there in each inter-program?** |

1. ICS

SELECT ?Program ?Subjects

WHERE {

?Program a ksr:ICS;

ksr:Subject\_Name ?Subjects.

}

1. FSc

SELECT ?Program ?Subjects

WHERE {

?Program a ksr:FSc;

ksr:Subject\_Name ?Subjects.

}

1. FA

SELECT ?Program ?Subjects

WHERE {

?Program a ksr:FA;

ksr:Subject\_Name ?Subjects.

}

1. I.Com

SELECT ?Program ?Subjects

WHERE {

?Program a ksr:I.Com;

ksr:Subject\_Name ?Subjects.

}

|  |  |
| --- | --- |
| **G5-E:** | **Which subjects are elective?** |

SELECT ?Program ?SubjectType ?ElectiveSubjects

WHERE {

?SubjectType a ksr:Elective\_Subjects;

ksr:Are\_Part\_of ?Program;

ksr:Subject\_Name ?ElectiveSubjects.

}

|  |  |
| --- | --- |
| **G5-F:** | **Which subjects are compulsory?** |

SELECT ?Program ?SubjectType ?ElectiveSubjects

WHERE {

?SubjectType a ksr:Compulsory\_Subjects;

ksr:Are\_Part\_of ?Program;

ksr:Subject\_Name ?ElectiveSubjects.

}

|  |  |
| --- | --- |
| **G5-G:** | **What are language choices for students?** |

SELECT ?Program ?LanguageChoice

WHERE { ?Program a ksr:Inter\_Program;

ksr:has ?LanguageChoice.

}

**G6: Examination**

|  |  |
| --- | --- |
| **ID** | **Question** |
| G6-A: | Who is responsible to conduct the examinations in Punjab? |
| G6-B: | Who is responsible for deciding the subjects for intermediate? |
| G6-C: | Who/when issues roll no slip? |
| G6-D: | What attributes does roll number slip include? |
| G6-E: | Which subjects’ practical is taken? |
| G6-F | When are exams starting? |
| G6-F | When are exams ending? |

**G7: Result**

|  |  |
| --- | --- |
| **ID** | **Question** |
| G7-A: | Who announces the result? |
| G7-B: | What attributes does the result sheet include? |
| G7-C: | What are the passing criteria for students of intermediate? |
| G7-D: | What are the fail criteria for students of intermediate? |