

## Higher Information Systems

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### 2006 q.23a Expert Systems Comparison and Distinction

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Companies involved in extracting mineral deposits such as oil and iron ore make use of a range of computer-based information systems, including decision support systems and expert systems.

a. Distinguish between a *decision support system* and an *expert system*. **(4)**

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### 2006 q.24d Expert Systems Comparison and Distinction

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Drumville College has over 5000 students attending classes in 102 courses in 64 classrooms, lecture theatres and practical rooms. Every year, it takes a member of staff several weeks to plan the timetable to ensure all the classes can take place as required.

d. Distinguish between an expert system and a relational database in terms of how data is represented and the method of querying. **(4)**

e. Explain what is meant by a deductive database. **(2)**

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### 2008 22 Expert Systems Comparison and Distinction

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Expert systems are widely used in organisations along with other information systems.

a. Compare the use of expert systems within an organisation with that of a *management information system*, with reference to decision making. **(4)**

b. Distinguish between an expert system and a relational database in terms of how data is represented. **(4)**

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### 2008P q. 27d Expert Systems Comparison and Distinction

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Compare an expert system with a relational database management system in terms of –

- Representation of data/knowledge
- Extraction of data/knowledge

Use your comparison to justify why the IT Manager at CITYCAR decided to develop an expert system rather than develop a relational database system for a vehicle fault diagnosis system. **(4)**

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### 2008P q.25 Expert Systems Comparison and Distinction

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Computer-based information systems such as expert systems and decision support systems are often used by companies to automate the planning of business activities and events.

a. Distinguish between an expert system and a decision support system. **(4)**

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### 2008P q.28c Expert Systems Comparison and Distinction

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One developer is proposing that the system be developed as a deductive database. Explain what is meant by a deductive database. **(2)**

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### 2009 26 Expert Systems Comparison and Distinction

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Holidays International is a members-only holiday firm. Members logging on to the company's website see a web page similar to that shown below.

a. This web page is produced using a *deductive database* making use of an expert system and a relational database.

Describe the part played by the expert system and the relational database in producing the page shown. **(3)**

b. Describe **one** limitation of using an expert system like this to recommend holidays. **(2)**

**Holidays International**

Welcome back Mr and Mrs Reid:

Your last three holidays arranged by us were:

1. Intercontinental Hotel, Sri Lanka
2. Hotel Superbe, Goa
3. Five Palms Resort, Fiji

Based on previous holidays arranged by us we would recommend:

1. Hotel Ritz, Maldives
2. Club Paradise, Mauritius
3. Excelsior Club and Resort, Seychelles

### 2009P q.24c Expert Systems Comparison and Distinction

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CallsforYou sell mobile telephones and call plans. The company recently introduced an expert system to assist customers in selecting the call plan to best suit their needs.

c. The results of a user's consultation are selected from a database. Compare a database management system and an expert system in terms of how data is represented. **(2)**

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### 2009P q.25 Expert Systems Comparison and Distinction

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Doonbrae Fitness operates a chain of 5 fitness centres and gyms. The company is considering having an expert system developed to help with the organisation of fitness classes and allocating instructors to these classes.

a. State **two** factors which may make a subject suitable for the development of an expert system. **(2)**

c. Describe **one** difference in the results presented to a user from a decision support system and an expert system. **(2)**