

REGISTRATION ASSESSMENT SITTINGS 2016

Part 1

Questions 1 to 10 are calculation question examples from part 1 of the registration assessment.

A calculator will be provided.

Answers are on page 12.

Prototype release date February 2015

1. A 6-year-old child has been prescribed Gaviscon suspension 10 mL four times a day. Gaviscon suspension contains 3.1 mmol Na^+ /5 mL. The recommended daily allowance (RDA) of salt for a 6-year-old child is 3 g (equivalent to 1.2 g sodium) per day. The atomic mass of sodium is 23.

What percentage of this child's recommended daily salt allowance is contained in a total daily dose of Gaviscon suspension? Round your answer to the nearest whole number.

2. The following hospital prescription is written for a 7-year-old child weighing 24 kg.

Date	Infusion	Infusion rate	Prescriber signature
29/06/16	Immunoglobulin 10% 0.5 g/kg	0.6 mL/kg/hr for 30 minutes then 1.2 mL/kg/hr for 30 minutes then 2.4 mL/kg/hr for 30 minutes then 4 mL/kg/hr for the remainder of the infusion	<i>A. Doctor</i> <i>29/6/16</i>

What is the total infusion duration of the immunoglobulin if it is infused at the prescribed rate? Round your answer up to the nearest whole minute.

minutes

Prototype release date February 2015

3. You receive a prescription for a 76-year-old patient for phenoxymethylpenicillin 250 mg/5 mL oral solution, 500 mg four times a day for ten days. You inform the patient that due to the medication's short life of seven days once it is prepared you will fulfil part of the prescription and supply the remainder at a later date. The patient agrees to take enough for five days today and call back for the remainder.

What is the correct number of 100 mL prepared bottles that you would be supplying today?

	bottles
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Prototype release date February 2015

4. Mr B, who weighs 60 kg, attends a pre-admission clinic at your hospital 2 weeks prior to having orthopaedic surgery. He is found to have moderate anaemia and his doctor prescribes a course of subcutaneous Eprex (epoetin alfa). The epoetin alfa is given at a dose of 300 units/kg daily for 15 days.

What is the total amount of epoetin alfa expressed in units that Mr B will be given for the 15 day course?

	units
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Prototype release date February 2015

5. Baby C, who is 1 month old and who weighs 3 kg, has been diagnosed with gastro-oesophageal reflux disease. He has been prescribed ranitidine liquid 75 mg/5 mL at a dose of 2 mg/kg three times a day.

What volume of ranitidine liquid in mL should be administered to Baby C per single dose?

 mL

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6. A patient is prescribed a cytotoxic medicine at a dose of 30 mg/m² daily for three days. The patient weighs 80 kg and is 1.80 m tall.

$$\text{Body surface area (m}^2\text{)} = \sqrt{\frac{\text{weight (kg)} \times \text{height (cm)}}{3600}}$$

What is the correct number of 10 mg capsules that are needed to provide the three day course of treatment?

capsules

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7. Mr B presents a prescription for prednisolone tablets 5 mg. The initial dose of 50 mg daily is to be taken for 2 weeks. At the end of the 2 weeks he is to reduce his daily dose by 5 mg once each week until the course is finished. You supply your total stock of 100 tablets.

What is the correct number of tablets that are owed to Mr B?

<input type="text"/>	tablets
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Prototype release date February 2015

8. Mr H is prescribed diamorphine 90 mg to be given over 24 hours using a syringe driver. The diamorphine infusion that is used contains 2 mg/mL.

**What is the correct infusion rate in mL/hour that the syringe driver should be set at?
Round your answer to one decimal point.**

mL/hr

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9. A child who weighs 9 kg is prescribed nitrofurantoin at a dose of 1 mg/kg at night for prophylaxis against recurrent urinary-tract infections.

What is the correct volume of nitrofurantoin suspension 25 mg/5 mL that this child should be given for each dose?

	mL
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Prototype release date February 2015

- 10.** A 53-year-old woman who weighs 78 kg presents to hospital after ingesting ethylene glycol (anti-freeze) 1 hour ago. In accordance with hospital guidance, the consultant requests to use oral ethanol for the management of the overdose. The oral loading dose of ethanol (in the form of whisky, gin, vodka at 40% by volume ethanol) is 2.5 mL/kg. The pharmacy department supply gin at 35% by volume ethanol.

What quantity in mL of 35% gin will be required to provide a loading dose of ethanol for this patient? Round your answer to the nearest whole number.

 mL

Prototype release date February 2015

Answers

Question number	Answer
1	48%
2	134 minutes
3	2 bottles
4	270 000 units
5	0.4 mL
6	18 capsules
7	355 tablets
8	1.9 mL/hr
9	1.8 mL
10	223 mL