


REGISTRATION ASSESSMENT SITTINGS 2019

Part 1 example questions

Notes

1. Questions 1 to 12 are examples from part 1 of the registration assessment.
2. The answers are on page 14.
3. In the registration assessment, where you see this icon,  you may find the resource pack provided useful.
4. In the registration assessment, only reference sources provided in the resource pack may be used to answer questions in part 1 of the assessment.
5. In part 1 of the registration assessment, you may use an approved make and model of calculator as specified by the GPhC.
6. These questions are examples and do **not** cover the entire registration assessment framework.
7. **More information on the registration assessment, including the answer sheets and how to complete these, is available in the pre-registration trainee pharmacist manual.**

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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 relative atomic mass of sodium is 23.

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

You may use this space for your rough working. Transfer your answer to your answer sheet.

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

Date	Infusion	Infusion rate	Prescriber signature
28/06/19	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> 28/6/19

What is the total infusion duration in minutes if the immunoglobulin is infused at the prescribed rate? Give your answer to the nearest whole minute.

You may use this space for your rough working. Transfer your answer to your answer sheet

Released December 2018

3. A 55-year-old woman has a percutaneous endoscopic gastrostomy (PEG) tube in situ. She requires 1800 kcal per 24 hours from her enteral feed, and has been instructed to use Nutrison Energy which contains 150 kcal per 100 mL. She would like to feed for 14 hours overnight.

At what rate in mL/hour should this feed be delivered? Give your answer to the nearest whole number.

You may use this space for your rough working. Transfer your answer to your answer sheet.

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4. A 62-year-old man, who weighs 60 kg, attends a pre-admission clinic at your hospital two 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.

How many units of epoetin alfa will this man be given, in total, during the 15-day course?

You may use this space for your rough working. Transfer your answer to your answer sheet.

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5. A baby 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.

**How many mL of ranitidine liquid should be administered to this baby per single dose?
Give your answer to one decimal place.**

You may use this space for your rough working. Transfer your answer to your answer sheet.

6. A patient is prescribed a cytotoxic medicine at a dose of 30 mg/m² daily for three days. The patient weighs 86 kg and is 1.84 m tall.

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

How many 10 mg capsules are needed to provide the 3-day course of treatment?

You may use this space for your rough working. Transfer your answer to your answer sheet.

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7. A 69-year-old man presents a prescription for prednisolone tablets 5 mg. The initial dose of 50 mg once daily is to be taken for 2 weeks. At the end of the two 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.

How many tablets are owed to this man?

You may use this space for your rough working. Transfer your answer to your answer sheet.

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8. An 81-year-old man is prescribed diamorphine hydrochloride 90 mg to be given subcutaneously over 24 hours using a syringe driver. The diamorphine hydrochloride is diluted to a final volume of 22 mL with water for injection.

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

You may use this space for your rough working. Transfer your answer to your answer sheet.

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.

How many mL of nitrofurantoin suspension 25 mg/5 mL should this child be given for each dose? Give your answer to one decimal place.

You may use this space for your rough working. Transfer your answer to your answer sheet.

- 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.

How many mL of 35% gin will be required to provide a loading dose of ethanol for this patient? Give your answer to the nearest whole number.

You may use this space for your rough working. Transfer your answer to your answer sheet.

11. A 54-year-old man has been diagnosed with bacterial meningitis that is sensitive to meropenem. He weighs 67 kg and has a BMI of 24 kg/m². He has a serum creatinine of 267 micromol/litre.



The SPC for meropenem IV would be provided in the resource pack in the actual assessment. It can be accessed here

<https://www.medicines.org.uk/emc/medicine/11215>

The Cockcroft and Gault formula for estimating creatinine clearance is provided below:

Cockcroft and Gault formula

$$\text{Estimated Creatinine Clearance in mL/minute} = \frac{(140 - \text{Age}) \times \text{Weight} \times \text{Constant}}{\text{Serum creatinine}}$$

- Age in years
- Weight in kilograms (use ideal body-weight where fat is likely to be the major contributor to body mass)
- Serum creatinine in micromol/litre
- Constant = 1.23 for men; 1.04 for women

What is the recommended total daily dose of meropenem in grams for this man?

You may use this space for your rough working. Transfer your answer to your answer sheet

- 12.** You are working as a practice pharmacist and have been asked to help the practice reduce expenditure on medicines. As a result, you are reviewing the use of tolterodine 4 mg m/r tablets, as these cost more than tolterodine 2 mg tablets at an equivalent dose.

Current costs are shown below:

Tolterodine 4 mg m/r tablets	£25.78 per 28 tablets
Tolterodine 2 mg tablets	£2.88 per 56 tablets

You have reviewed nine patients who are prescribed tolterodine 4 mg m/r tablets daily on repeat prescription and have identified that seven of them could potentially switch to using the tolterodine 2 mg tablets at a dose of one tablet twice a day. The practice has a repeat prescribing policy of 56 days treatment on a prescription.

What is the total saving for the practice for six repeats assuming all seven suitable patients switch to using the tolterodine 2 mg tablets? Give your answer to the nearest pound.

You may use this space for your rough working. Transfer your answer to your answer sheet.

Answers

Question	Answer
1.	48%
2.	134 minutes
3.	86 mL/hour
4.	270 000 units
5.	0.4 mL
6.	18 capsules
7.	355 tablets
8.	0.92 mL/hr
9.	1.8 mL
10.	223 mL
11.	4 g
12.	1924 pounds